

INFORMATION ONLY

SPECIAL PROVISIONS

Route U.S. 206 at Entrance to Stokes State Forest
Contract No. 120950525
Widening, Resurfacing and Structures
Sandyston Township, Sussex County
Federal Project No. STP-0035(166)

AUTHORIZATION OF CONTRACT

The Contract for this Project is authorized by the provisions of Title 27 of the Revised Statutes of New Jersey and supplements thereto, and Title 23 of the United States Code - Highways.

SPECIFICATIONS TO BE USED

The 2001 Metric Standard Specifications for Road and Bridge Construction, of the New Jersey Department of Transportation as amended herein will govern the construction of this Project and the execution of the Contract. These Special Provisions consist of the following:

Pages 1 to 48 inclusive for General, Road, and Bridge Provisions.

Required Contract Provisions, Federal-Aid Construction Contracts (Form FHWA-1273) pages 1 to 10 inclusive, revised March 1994.

Standard Federal Equal Employment Opportunity Construction Contract Specifications (Executive Order 11246), pages 1 to 5 inclusive, dated December 1980, revised April 1984.

Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity (Executive Order 11246), pages 1 and 2, dated December 1980, revised April 1984.

State of New Jersey Equal Employment Opportunity for Contracts Funded by FHWA, page 1, dated November 1978, revised April 1984.

Emerging Small Business Enterprise Utilization Attachment, FHWA Funded Contracts, pages 1 to 7 inclusive, dated March 2001.

Equal Employment Opportunity Special Provisions, pages 1 to 11 inclusive, dated February 1976, revised April 1984, November 22, 1988, and March 1998.

Special Contract Provisions for Investigating, Reporting, and Resolving Employment Discrimination and Sexual Harassment Complaints, pages 1 and 2 inclusive, dated January 1989.

General wage determinations issued under Davis-Bacon and related acts, published by US Department of Labor, may be obtained from the Davis-Bacon web site at <http://www.access.gpo.gov/davisbacon/nj.html> under the appropriate county, select the construction type heading: HIGHWAY.

The Contractor shall pay the minimum wage rates determined by the United States Secretary of Labor and the New Jersey Department of Labor. If the minimum wage rate prescribed for any craft by the United States Secretary of Labor is not the same as the minimum wage rate prescribed for that craft by the New Jersey Department of Labor, the higher rate shall be the rate paid.

State wage rates may be obtained from the New Jersey Department of Labor (Telephone: 609-292-2259) or by accessing the Department of Labor's web site at <http://www.nj.gov/labor/lse/lspubcon.html>. The State wage rates in effect at the time of award will be made a part of this Contract, pursuant to Chapter 150, Laws of 1963 (NJSA 34:11-56.25, *et seq.*).

In the event it is found that any employee of the Contractor or any subcontractor covered by the Contract, has been paid a rate of wages less than the minimum wage required to be paid by the Contract, the State may terminate the Contractor's or subcontractor's right to proceed with the Work, or such part of the Work, as to which there has been a failure to pay required wages and to prosecute the Work to completion or otherwise. The Contractor and its sureties shall be liable to the State for any excess costs occasioned thereby.

DIVISION 100 - GENERAL PROVISIONS

SECTION 101 - GENERAL INFORMATION

101.03 Terms.

THE THIRD ITEM LISTED UNDER THE TERM "COMPLETION" IS CHANGED TO:

3. the Contractor has satisfactorily executed and delivered to the Engineer all documents, which is to include the federal form FHWA-47 "Contractor's Statement of Materials and Labor" according to 23CFR 635, for Federal Funded Projects, certifications, and proofs of compliance required by the Contract Documents, it being understood that the satisfactory execution and delivery of said documents, certificates, and proofs of compliance is a requirement of the Contract.

THE TERM "EXTREME WEATHER CONDITIONS" IS CHANGED TO:

EXTREME WEATHER CONDITIONS. When, solely as a result of adverse weather, the Contractor is not able to work, the Contractor is entitled to claim that progress of the Work has been affected by extreme weather conditions and may seek an extension of Contract Time consistent with the provisions of Subsection 108.11.

THE FOLLOWING IS ADDED:

PARCEL. Property to be acquired for transportation purposes, described by metes and bounds.

101.04 Inquiries Regarding the Project.

Inquiries regarding the various types of work of this Contract shall be directed to the following representatives of the Department having offices at P.O. Box 600, Trenton, New Jersey 08625, or such other individuals as may hereafter be designated:

1. **Before Award of the Contract.** All inquiries shall be directed to the Bureau of Quality Assurance at P.O. Box 600, Trenton, New Jersey 08625.

Telephone: 609-530-2706 (Joseph Fasanella)
Fax: 609-530-3853

All inquiries shall include the following:

- a. Name of the company;
- b. Telephone number, fax number, and contact person; and
- c. Specifics of the inquiry, including anticipated impacts.

The Department will investigate the information provided in the inquiry and then respond through an addendum only if determined to be necessary.

2. **After Award of the Contract.** All inquiries shall be directed to the Resident Engineer through the following Regional Construction Office:

North
Mr. Carl F. Kneidinger, Regional Construction Engineer
200 Stierli Court
Mt. Arlington, NJ 07856-1322
Telephone: 973-770-5025

SECTION 102 - BIDDING REQUIREMENTS AND CONDITIONS

102.06 Examination of Contract Documents and Site of Project.

6. Existing Structures.

THE FIRST SENTENCE IS CHANGED TO:

A list of existing structures within the Project is provided on the Plans.

SECTION 104 - SCOPE OF WORK

104.07 Changes in Character of Work.

THE FIRST PARAGRAPH UP TO AND INCLUDING THE FIRST SENTENCE OF ITEM 1 IS CHANGED TO:

If an ordered alteration in the Work pursuant to Subsection 104.02 materially changes the character of the work of a Pay Item, and if the change substantially increases or decreases the actual unit cost of such changed item as compared to the actual or estimated actual cost of performing the work of said item according to the Contract Documents originally applicable thereto, in the absence of a supplementary agreement or unprotested Change Order specifying the compensation payable, an adjustment in compensation therefore will be made according to the following:

1. The basis of such adjustment in compensation will be the difference between the actual unit cost to perform the work of said item or portion thereof involved in the alteration as originally planned and the actual unit cost of performing the work of said item or portion thereof involved in the alteration, as changed.

SECTION 105 - CONTROL OF WORK

105.09 Cooperation with Utilities.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The corporations, companies, agencies, or municipalities owning or controlling the utilities, and the name, title, address, and telephone number of their local representative are as listed below:

Electric

Jersey Central Power and Light, A First Energy Company
300 Madison Avenue
Morristown, N.J. 07962
Mr. William D. Pollak
Senior Engineer
Telephone: 973-401-8143
Fax: 610-988-6060

Electric

Jersey Central Power and Light, A First Energy Company
300 Madison Avenue
Morristown, N.J. 07962
Ms. Marian M. May
Layout Technician – Senior
Telephone: 973-401-8965
Fax: 973-644-4259

Telephone

Sprint

197 Route 94

Lafayette, N.J. 07848-4614

Mr. Ned E. Jennings

Telephone: 973-573-4470

Fax: 973-579-4589

Cable Television

Service Electric Cable TV of New Jersey Inc.

320 Sparta Avenue

Sparta, N.J. 07871

Ms. Robbin Caldarella

Assistant Manager

Telephone: 973-729-4871

Fax: 973-729-5635

Bidders are advised to verify the above information as its accuracy and completeness is not guaranteed by the Department.

Temporary and permanent relocation work to be performed by the various utilities is as shown on the Contract Plans, and is summarized as follows:

1. Jersey Central Power and Light, A First Energy Company

a. Work to be performed by Jersey Central Power and Light Company/GPU Energy is summarized as follows:

- (1) Route 206 STA. 1+902 LT. (pole #NJ134SDF708-2) to STA. 2+072 LT. (pole #NJ137SD 113 ½) to STA. 2+117 RT. (pole #NJ138SD 114). Install 4 poles and transfer existing aerial facilities.
- (2) Route 206 STA. 1+990 RT. (new pole no#) . Install 1 pole and transfer existing aerial facilities.
- (3) Route 206 STA. 2+027 RT. (pole #NJ136SD-1505). Install 1 pole and transfer existing aerial facilities.
- (4) Route 206 STA. 1+950 RT. (pole #112 NJ135SD F708-2) to STA. 2+117 RT. (pole #NJ138SD 114) remove abandoned poles and facilities.

Schedule: #1, #2, #3 & #4 utility requires 4 weeks notice and 25 working days to complete.

(Note: poles and aerial facilities can not be installed until tree trimming is complete.)

- (5) Route 206 STA. 2+117 RT. (pole #NJ138SD 114) to STA. 2+238 RT. (pole #NJ140SD F708-2) to STA. 2+282 LT. (pole #NJ141SD F708-2). Install 2 poles and transfer existing aerial facilities.
- (6) Route 206 STA. 2+117 RT. (pole #NJ138SD) 114 to STA. 2+234 RT. (pole #NJ140SD F708-2) remove abandoned poles and facilities.

Schedule: #5 & #6 utility requires 4 weeks notice and 15 working days to complete.

- (7) Route 206 STA. 1+542 LT. (pole #NJ128SD) to STA. 1+574 RT. (new pole #) to STA. 1+777 RT. (new pole #) to STA. 1+840 LT. (pole #NJ133SD). Install 6 poles and transfer existing aerial facilities.

- (8) Route 206 STA. 1+542 LT. (pole #NJ128SD) & STA. 1+777 RT. (pole no#) . Remove abandoned poles.

Schedule: #7 & #8 utility requires 4 weeks notice and 60 working days to complete.

(Note: poles and aerial facilities can not be installed until retaining wall #2 is complete.

- (9) Route 206 STA. 1+762 LT. (pole #NJ132SD-H107). Install 1 pole and transfer existing aerial facilities.

- (10) Route 206 1+604 LT. (pole #NJ129SD). To STA. 1+840 LT. (#NJ133SD). Remove abandoned poles and facilities.

Schedule: #9 & #10 utility requires 4 weeks notice and 10 working days to complete.

- (11) Route 206 STA. 1+482 RT. (new pole no#) install 1 pole.

Schedule: #11 utility requires 4 weeks notice and 2 working days to complete.

- (12) Route 206 STA. 1+482 LT. (pole #NJ127SD). Install 1 pole and transfer existing aerial facilities.

- (13) Route 206 STA. 1+482 LT. (pole #NJ127SD) to STA. 1+542 LT. (pole #NJ128SD). Remove abandoned pole and facilities.

Schedule: #12 & #13 utility requires 4 weeks notice and 5 working days to complete.

- (14) Route 206 STA. 1+839 RT. (pole #NJ133XSD). Remove abandoned pole and facilities.

Schedule: #14 utility requires 4 weeks notice and 1 working days to complete.

2. Sprint

a. Work to be performed by Sprint is summarized as follows:

- (1) Route 206 STA. 1+379 RT. (pole #130-H106) to STA. 1+394 LT. (pole #NJ125SDF708-2). TO STA. 1+482 LT. (pole #NJ127SD) to STA. 1+480 LT. (pole #NJ1593SD-H519-1) & STA. 1+542 LT.(pole #NJ128SD). Transfer existing aerial facilities on JCP&L poles

Schedule: #1 utility requires 4 weeks notice and 15 working days to complete.

- (2) Route 206 STA. 1+542 LT. (pole #NJ128SD) to STA. 1+840 LT. (pole #NJ133SD). Temporarily transfer existing aerial facilities on JCP&L existing poles.

Schedule: #2 utility requires 4 weeks notice and 15 working days to complete.

- (3) Route 206 STA. 1+840 LT. (pole #NJ133SD) to STA. 2+072 LT. (pole #NJ137SD 113 1/2). TO STA. 2+117 RT. (pole #NJ138SD 114), STA. 2+010 LT. (new pole no#) to STA. 1+967 RT. (pole no#). Transfer existing aerial facilities on JCP&L poles

Schedule: #3 utility requires 4 weeks notice and 20 working days to complete.

- (4) Route 206 STA. 1+379 RT. (pole #103-H106) to STA. 2+117 RT. (pole #NJ138SD 114). Remove abandoned poles.

Schedule: #4 utility requires 4 weeks notice and 25 working days to complete.

- (5) Route 206 STA. 2+117 RT. (pole #NJ138SD 114) to STA. 2+238 RT. (pole #NJ140SD F708-2) to STA. 2+282 LT. (pole #NJ141SD 708-2) to STA. 2+430 LT. (pole #NJ144SD) to STA. 2+457 RT. (pole #119). Transfer existing aerial facilities on JCP&L new poles.
- (6) Route 206 STA. 2+117 RT. (pole #NJ138SD 114) to STA. 2+457 RT. (pole #119) remove abandoned poles & facilities.

Schedule: #5 & #6 utility requires 4 weeks notice and 25 working days to complete.

- (7) Route 206 STA. 1+542 LT. (pole #NJ128SD) to STA. 1+575 RT. (new pole no#) to STA. 1+777 RT. (new pole no#) to STA. 1+762 LT. (pole # NJ132SD-H107) & STA. 1+840 LT. (pole #NJ133SD). Transfer existing aerial facilities on new JCP&L poles.

Schedule: #7 utility requires 4 weeks notice and 20 working days to complete.

3. Service Electric Cable TV of New Jersey Inc.

a. Work to be performed by Service Electric Cable TV of New Jersey, Inc. is summarized as follows:

- (1) Route 206 STA. 1+482 LT. (pole #NJ127SD) to STA. 1+542 LT. (pole #NJ128SD). Transfer existing aerial facilities on JCP&L new poles.
- (2) Route 206 STA. 1+482 LT. (pole #NJ127SD) to STA. 1+542 LT. (pole #NJ128SD). Remove abandoned facilities.

Schedule: #1 & #2 utility requires 4 weeks notice and 5 working days to complete.

- (3) Route 206 STA. 1+542 LT. (pole #NJ128SD) to STA. 1+574 RT. (new pole #) to STA. 1+777 RT (new pole #) to STA. 1+739 LT (pole #27000L). Transfer existing aerial facilities on JCP&L new poles.
- (4) Route 206 STA. 1+542 LT. (pole #NJ128SD) to STA. 1+762 LT. (pole # NJ132SD-H107) to 1+739 LT (pole #27000L). Remove abandoned facilities.

Schedule: #3 & #4 utility requires 4 weeks notice and 15 working days to complete.

105.15 Field Office.

1. Construction Field Offices.

a. Type A.

THE FOLLOWING IS ADDED:

- (1) 3 multi-line touch-tone telephones and 2 telephone lines for use with the telephones installed as directed and operational in the Field Office and other facilities specified.
- (a) 2 dedicated, operational telephone line(s) for Fax machines (s) and/or microcomputer system(s) modem use installed as directed in the Field Offices specified.
- (b) 2 portable hand held cellular phone(s). The cellular telephone plan shall provide for the anticipated usage of approximately 300 minutes per telephone per month. Each of the cellular phones shall have as a minimum the following features:
 - 1) Home rate with no roaming charges within the entire state
 - 2) 832 Channel Compatible
 - 3) Mute Function
 - 4) Back Light Display with Battery Saver
 - 5) Signal Strength Indicator
 - 6) Individual Call Length Timer

- 7) Full Lock Function
- 8) 30 Memory Number Feature
- 9) Low Battery Warning
- 10) 70 Minute Continuous Use
- 11) 12 hour Standby Mode
- 12) Alphanumeric Display
- 13) Transmission Power 0.6 Watt
- 14) Passive Repeating Antenna for Vehicle
- 15) Spare high capacity Battery Pack
- 16) Home Charging Station
- 17) Cigarette lighter power adapter /charger
- 18) AC charging station

THE FOLLOWING IS ADDED:

- 19) Hands-Free headset
- (d) 1 telephone answering machine
- (17) The microcomputer system shall include the following:
 - (a) 1 base computer system(s) having at minimum:
 - 1) Pentium IV Processor at 1.5 GHz or faster, Intel processor with MMX technology, with a 512 MB RAM, 32 MB Video RAM, mouse, mouse pad, 60 GB hard drive, one 52X DVD-ROM Drive, one CD-R Recordable Drive, and one 90-millimeter (3½-inch), 1.44 MB floppy diskette drive installed as the "A" drive.
 - 2) 56K baud data/fax modem. (e.g., 3Com U.S. Robotics 56K Faxmodem, 3Com U.S. Robotics Courier V.Everything/V.34 - 56K ITU / x2 Technology, or Hayes Accura 56K).
 - 3) One network card for each base computer system specified, when more than one base computer is specified
 - 4) One Fast Ethernet Hub Switch with appropriate number of ports and cables (e.g., 3COM 100 Hub)
 - 5) One dedicated telephone line to be used in conjunction with the microcomputer modem.
 - 6) 483-millimeter (19-inch) or larger Super VGA color monitor having a dot pitch of 0.28, with anti-glare screen, and tilt/swivel capabilities.
 - 7) 250-Megabyte Zip Drive internal or external with backup software for MS Windows and thirty 250-Megabyte formatted data cartridges corresponding to the tape drive size (e.g., Iomega Zip Drive or equivalent).
 - 8) Uninterruptible power supply (UPS) - OMNI 1000 or approved equal (e.g., APC-1000 - American Power Corporation).
 - 9) Surge protector for the entire computer workstation to be used in conjunction with the UPS (e.g., Zero Surge Power, Inc. - Point of Use - 2R-15 amp/120 volts).
 - 10) Static mat, floor type, 1.2 by 1.5 meters or larger with grounding capabilities.
 - 11) Computer workstation, printer stand, and/or table having both appropriate surface and chair height.
 - 12) Five boxes of 90-millimeter (3½-inch) floppy diskettes that match the drive density of the 1.44-MB floppy diskette drive (ten per box).
 - 13) 150 CD-R 700-MB (or larger) recordable CD's compatible to CD drive.
 - 14) One floppy diskette holder (holds 50 floppy diskettes), and dust covers for the microcomputer, monitor, keyboard, and printer.
 - 15) Two head cleaner kits for 90-millimeter (3½-inch) floppy diskette drive.
 - (c) One software package, on CD-ROM with documentation, including:
 - 1) Microsoft Windows, latest version with future upgrades.
 - 2) Microsoft Office Professional, latest version. Software package should contain the following: word processor, spreadsheet, and database.
 - 3) Helix Nuts and Bolts Advanced Utilities for Windows, latest version, or compatible software package.
 - 4) Anti-Virus software, latest version with monthly updates (e.g., Norton's Anti-Virus, McAfee Anti Virus, or Dr. Solomon's).
 - 5) Visio Professional Graphics Software for Windows, latest version.
 - (d) 1 base printer(s) for Primavera having at minimum:

- 1) Color Inkjet printer of current technology, with appropriate printer cable.
- 2) Ink cartridge replacements, one of each color, every other month for the duration of the construction project.
- 3) One 10-ream carton of 8½ X 11 inches size paper (500 sheets per ream, weight: 75 grams per square meter, color: white, grain: long, for laser printers and copiers) every three months for the duration of the construction project.
- (e) 1 Primavera SureTrak or equivalent software, latest version.

To be approved as a Substitute or "Or Equal", the software must be completely compatible with the Department database that contains the Capital Program Management's design process schedule and budget, as well as the construction scheduling from design through construction. The software shall be compatible with the hierarchy of the coding and able to import and export data within the Department's Capital Program Management's database without distortion of any coding or relationships contained in the database.

The Contractor shall only utilize equivalent or compatible software for a project, which has received written approval from the Department in accordance with the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual. The approved equivalent/compatible software utilized shall not vary throughout the construction phase.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Three (3) each: hard hats (Orange in color, reflectorized) and safety vests (Orange in color, reflectorized, 360 deg. high visibility that meets ANSI/ISEA standards for Class 3 garments). It should be noted that safety vests are to be replaced each year for the duration of the project.

Three (3) sets: ear protection and eye protection

Concrete testing equipment to include: Concrete receptacle (wheel barrow), square tipped shovel, concrete scoop, slump cone & base set (rod, slump cone, base and funnel), tamping rod (305mm long, 10mm diameter with hemispherical ends), tamping rod (610mm long, 16mm diameter with hemispherical ends), 305 mm (12inch) ruler, Forney air meter (complete set) or equivalent, concrete thermometer, sponge, long-handled round scrub brush, rubber or rawhide mallet (1.02 +/- 0.23kg), pointed trowel, 18.9 liter (5 gallon) plastic bucket, concrete cylinder items in accordance with this project's applicable governing Specifications.

Three (3) two-meter folding wood rulers

One(1) electronic Smart level

One(1) thirty-meter steel tape measure

One(1) thirty-meter cloth tape measure

One(1) fifteen-meter tape measure

Two (2) plumb bobs and cords

Two (2) line levels and cords

One(1) digital infrared thermometer

One(1) metric measuring wheel

Two (2) asphalt thermometers

SECTION 106 – CONTROL OF MATERIAL

106.03 Materials, Inspections, Tests, and Samples.

THE FOLLOWING SUBPART IS ADDED:

- D. Sharing of Pay-Adjustments for Portland Cement Concrete.** Positive and negative pay-adjustments, as defined in Subsection 914.02, Subpart E, are awarded to encourage high quality construction and, when necessary, to recoup the anticipated extra costs to the Department resulting from poor quality construction. The manner in which positive and negative pay-adjustments are to be shared by the prime Contractor and Subcontractors or Producers is to be negotiated by the affected parties. A letter signed by both parties, stating that an agreement has been reached between the parties shall be provided to the Engineer before commencement of Work. Nothing contained herein shall create right of action either in law or equity against the Department.

106.06 Materials Field Laboratory

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The Contractor shall annually pay all fees necessary to procure and maintain a Uniform Code Type Four Fire Permit according to regulations of the New Jersey Department of Community Affairs. Additional information concerning the permit fees and processing of the application may be obtained by contacting the Bureau of Materials.

1. Laboratory.

b.

THE FOLLOWING IS ADDED:

(19) Hands-Free headset

THE LAST SEVEN PARAGRAPHS ARE CHANGED TO:

Setting up the materials field laboratory shall consist of furnishing the laboratory and enclosure complete with furniture, equipment, electricity, water, heating, air-conditioning, installation and activation of telephone lines, telephone sets (touch tone and cellular), pager units, sanitary facilities, and lavatory supplies.

Maintenance of the materials field laboratory, for the time required, shall consist of maintaining the furniture, equipment, and utilities which includes the cost of telephone fixed monthly service charges, cellular phone fixed monthly service charges for the plan specified and pager services, providing lavatory supplies, janitorial and waste disposal services weekly, restocking of the first aid box, and snow removal services. Maintenance of the materials field laboratory shall also include monthly rent.

Payment for nuclear density gauge will be made by the number of units supplied.

Payment for setting up the materials field laboratory will be made by the number of units.

Payment for the maintenance of the materials field laboratory will be made for each month or fraction thereof that the materials field laboratory is required, except that payment will not be made for any month or fraction thereof in which the Contractor is assessed liquidated damages according to Subsection 108.16.

Payment will be made under:

Pay Item

NUCLEAR DENSITY GAUGE

MATERIALS FIELD LABORATORY SET-UP

MATERIALS FIELD LABORATORY MAINTENANCE

Pay Unit

UNIT

UNIT

MONTH

Payment for telephone service will be made according to Subsection 108.15.

SECTION 107 - LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

107.22 Risks Assumed by the Contractor

SUBPART 1 IS CHANGED TO:

- 1. Risks of Loss or Damage to the Permanent Construction.** Until Acceptance, and within the limits of the Project's work, the Contractor shall bear the risk of all loss or damage to all permanent construction and temporary construction performed under this Contract and to materials, whether or not it has received payment for such construction or materials under Subsection 109.05, 109.06, or 109.07, except payment will be made to the Contractor for the repair or replacement of any permanent element of the construction which has not been accepted by the Department, if the element of the work damaged is completed to the stage of serving its intended function and is subsequently damaged by accident by public traffic. In order to receive payment, the Contractor must supply satisfactory evidence that such damage was caused by a public traffic accident which was not caused by vandalism or by the equipment of the Contractor or any of its subcontractors or suppliers. Satisfactory evidence shall generally be limited to: accident reports filed with the Division of Motor Vehicles, police agencies or insurance companies; statements by reliable, unbiased eye witnesses; identification of the vehicle involved in the accident. Physical evidence that the damage was caused by a motor vehicle (such as tire marks or broken headlight glass) will not be sufficient unless it can be clearly shown that the damage was not caused by the Contractor's vehicles or by vandalism. The Contractor shall take every precaution, as allowed by the Contract against injury or damage to any part of the construction or to materials by the action of the elements, the traveling public, vandalism, or from any other cause, whether arising from the execution or the non-execution of the work.

The Contractor shall promptly repair, replace, and make good any such damage or loss without cost to the Department. The Contractor shall not bear such risk of loss or damage, which arises from acts of war or floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon unless such loss or damage is covered by insurance.

SECTION 108 - PROSECUTION AND PROGRESS

108.02 Subcontracting.

There are no Specialty Items in this Project.

108.03 Commencement of Work.

THE THIRD SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Construction operations shall not begin until the Contractor has supplied, and the Engineer has accepted, the preliminary schedule and other certifications, forms, schedules, and any other information required by the Contract Documents, and until the Contractor has established a field office as required by Subsection 105.15.

108.04 Progress Schedule and Prosecution of the Work.

THIS SUBSECTION IS CHANGED TO:

In scheduling and executing the Work, the following shall be complied with:

1. Progress Schedules. The progress schedule shall conform to and incorporate the following requirements:

a. General.

- (1) The work shall be monitored by a detailed CPM schedule. The CPM schedule shall be developed utilizing the most current NJDOT Capital Program Management Construction Scheduling Standard Coding and Procedures for Designers and Contractors Manual and the NJDOT Primavera template project containing the latest standard coding. The manual and template are available from the Bureau of Quality Management Services.

The CPM schedule shall consist of diagrams and accompanying mathematical analyses. The scheduling of submittals, procurement, construction, and all else necessary to complete the Work as described in the Contract Documents, is the responsibility of the Contractor. The requirement for the CPM schedule is included to ensure adequate planning and execution of the Work and to assist the Department in appraising the reasonableness of the proposed schedule, as well as its compliance with Contract requirements.

The CPM schedule is the Contractor's committed plan to complete all work within the allotted time. The Contractor assumes full responsibility for the prosecution of the Work as shown. The CPM schedule shall be based on and derived from detailed schedules used to complete all Contract activities.

- (2) No claim for extension of time due to extra work or any other type of delay will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.
- (3) No claim for additional compensation as specified in Subsection 109.04 will be considered unless the baseline schedule has been approved and monthly updates are current and submitted within the time limits stated.
- (4) The CPM preliminary, baseline, and updated schedules shall be submitted in electronic format on a floppy diskette or compact disk, in addition to the required number of copies specified in b. (1) and b. (2) below.
- (5) Once the CPM baseline schedule has been approved, the Contractor shall not deviate therefrom without first notifying the Engineer in writing and schedule is updated in accordance with 1.h. and 1.i. below.

b. Submittals. The CPM schedule shall consist of the following two distinct initial submittals:

- (1) **Preliminary Schedule.** No later than 10 State Business Days after execution of the Contract, the Contractor shall submit to the Engineer for review and approval or rejection and return a preliminary schedule. The contractor shall submit six copies of:

- (a) A CPM time-scaled diagram defining the Contractor's planned activities during the first 90 Calendar Days. For projects with a construction cost over \$ 40 million, a CPM time-scaled diagram defining the Contractor's planned activities during the first 120 Calendar Days.
- (b) A summary network for the remainder of the Contract time. The preliminary schedule shall indicate all milestone activities expected to be completed or partially completed before submission and approval of the CPM baseline schedule as specified in b. (2) below.
- (c) All multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the preliminary schedule.
- (d) The Work shall not begin until the preliminary schedule has been approved. Five State Business Days will be required for review and approval or rejection and return of the preliminary schedule.
- (2) **Baseline CPM Schedule.** In accordance with the time frames listed below, the Contractor shall submit six copies of the Baseline CPM Schedule documents depicting the Contractor's work plan for the entire Contract.

| Project Construction Cost (\$ million) | Time Frame After Approval of Preliminary Schedule for Submission of the Baseline CPM Schedule (State Business Days) |
|---|--|
| < 5 | 10 |
| 5 - 15 | 15 |
| 15 - 40 | 20 |
| > 40 | 30 |

The Contractor shall submit to the Engineer for review and approval or rejection and return:

- (a) Computer generated tabular schedule and logic reports in accordance with 1.e. below.
- (b) Time-scaled computer generated Layout Output in conformance with 1.f. below.
- (c) A written narrative explaining the schedule and the Contractor's general approach for achieving Substantial Completion and the date of Completion as specified in Subsection 108.10 of these Special Provisions. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the Baseline CPM Schedule.
- (d) Electronic version as specified in 1.a. (4) above.
- c. **CPM Schedule Requirements for the Baseline and Updates.**
 - (1) The CPM schedule and updates shall contain the following:
 - (a) The order in which the Contractor proposes to prosecute the Work; the starting dates of the various work stages, operations, and principal items of work including procurement of materials and plant, and the contemplated dates for completing the same.
 - (b) List dates for all required submissions.
 - (c) A clear outline of the intended maintenance of traffic.
 - (d) The locations and timeframes for the installation of temporary and permanent soil erosion and sediment control measures to be installed.
 - (e) All unusual requirements specific to the project included in the Contract Documents or as deemed appropriate for the project.
 - (f) Special consideration to sensitive areas such as wetlands, floodplains, waterways, and parklands to ensure that appropriate staging and seasonal constraints are considered in order to maximize the effectiveness of the soil erosion and sediment controls.
 - (g) The time frames when work is restricted in sensitive areas as reflected in present and future permits as anticipated or known.
 - (h) Updates to reflect permit conditions if changed.
 - (i) Include a detailed, step-by-step outline of any clean-up operations regarding contaminated material.
 - (j) The work of the Contractor, subcontractors, suppliers, the Department, permitting agencies, utility companies, and all others that affect progress shall be shown and identified on the schedule by responsibility codes.
 - (k) Procurement activities shall be shown, including plans, permits, materials, individual working drawings, fabrication, and delivery of the material. 20 State Business Days will be required for

review and certification or rejection and return of fabrication working drawings. 30 State Business Days will be required for review and approval or rejection and return of working drawings for items that were included as conceptual and the Contractor is required to complete final design plans. The time frames set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.

- (l) Traffic staging, delivery of Department - furnished labor/equipment, project phasing, right-of-way availability dates, and any other requirements specified in Divisions 200 through 900 shall be shown.
- (m) The CPM schedule shall contain sufficient activities to adequately depict the Work, and will be subject to the review and approval of the Engineer.
- (n) The logic and activity time durations established by the Contractor shall be consistent with the Contract Documents and be reflective of proper coordination between trades.
- (2) The CPM schedule shall operate as follows:
 - (a) The CPM schedule shall be of the precedence type.
 - (b) One activity for each discrete component part of each Pay Item scheduled in the Proposal. The Engineer may allow grouping of similar Pay Items into one activity. No work activity shall have a duration greater than 30 Calendar Days, except as approved by the Engineer. The activities shall be consistent with the Work Breakdown Structure (WBS), and shall also include discrete component parts of the Contractor's submittal preparation, Department approval, procurement, and construction work activities with sufficient detail such that all the relationships with all direct and non-direct parties to the Work are shown.
 - (c) The system shall be based upon network diagrams and accompanying mathematical tabulations as described hereinafter. Diagrams shall show the order and interdependence of activities and the sequence and quantities in which work is to be accomplished. The basic concept of network scheduling shall be followed to show how the start of a given activity is dependent on the completion of preceding activities and how its completion may affect the start of subsequent activities. The critical path shall be distinguished from other paths on the network.
 - (d) The completion date of the CPM schedule shall be the date of Completion specified in Subsection 108.10 of these Special Provisions, except as specified in Subsection 108.04 subpart 5, which shall be input as a Finish Milestone with a Late Finish Constraint. All Intermediate Milestones required in the Contract shall be shown in proper logical sequence and input as a "Start-no-Earlier-Than" constraint for entrance into an area or start activity or a "Finish-no-Later-Than" constraint date for completions.
 - (e) Activities shall be described such that the Work is readily identifiable for assessment of start and completion, as well as intermediate status. Descriptions shall utilize activity codes for physical locations at each stage such as distance-markers, structures, and elevations where possible to define the Work. Activity descriptions of "Start," "Continue," "Completion," "X percent," "Y percent," "Z percent" or similar nonspecific descriptions will not be allowed.
 - (f) The CPM schedule shall be calculated in Working Days. The Working Day to calendar date correlation shall be based upon the Contractors proposed work week with adequate allowance for weekends, legal holidays and any special requirements of the Contract. Activities shall indicate the calendar being used. Durations for activities shall not be less than one workday. Multiple shifts per day and anticipated production rates shall be detailed in the Contractor's narrative accompanying the baseline schedule and subsequent updates.
 - (g) Constraint dates are permitted only on milestone activities, unless otherwise approved by the Engineer.
 - (h) All activities with the exception of the Project Start Milestone and Project Completion Milestone shall have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with a succeeding activity. Start-to-Finish relationships are not acceptable.
 - (i) CPM schedules, which have been resource leveled, are permissible, provided the effects of leveling are incorporated in the schedule using "Start-no-Earlier-Than" date constraints.
- d. **Computer Program Requirements.** The computer program requirements shall be the same as that specified in Subsection 105.15 subpart 1.e. of these Special Provisions.

e. Tabular Reports.

- (1) CPM schedule reports shall be provided for the following sort orders:
 - (a) Total float, then early start for activities with float less than 20 days.
 - (b) Grouped by responsibility, then by early start.
 - (c) Grouped by WBS, area, then sorted by early start.
- (2) The minimum activity information required for each of the above reports in (1), shall include the following:
 - (a) A unique activity ID for each activity.
 - (b) A description of the Work represented by the activity.
 - (c) Location code identification.
 - (d) Work responsibility code identification.
 - (e) Original activity duration and remaining activity duration in Working Days.
 - (f) Early and late, start and finish dates calculated according to CPM principles.
 - (g) Total float.
 - (h) Historical (actual) dates for activities completed or underway shall replace the appropriate calculated dates.
 - (i) Stages.
 - (j) Calendar used for each activity.

f. CPM Time-Scaled Layout Output.

- (1) The network displayed on the schedule diagram shall depict the exact detail of the CPM schedule reports.
- (2) The network diagram shall be of the precedence type and drawn by using early dates.
- (3) The layout output shall be time-scaled. The length of the activity representation shall be proportional to the activity duration.
- (4) The activity display shall include the:
 - (a) Activity description.
 - (b) Activity identification.
 - (c) Activity original duration and remaining duration.
 - (d) Activities coded by area, responsibility, and WBS.
 - (e) Activity total float.
 - (f) Activities early start dates.
 - (g) Activities finish dates.
- (5) The activities, which are displayed on the network diagram, shall be grouped by WBS and sorted by area. The title of these components shall appear on the left-hand side of the plot.
- (6) The critical path shall be identified on the plot.
- (7) Vertical lines indicating the start and the end of each month shall be shown.
- (8) The data date shall be indicated on the plot in the activity display and in the title at the top or bottom of the plot.
- (9) Completed activities shall be indicated on the plot.
- (10) The Contract title shall be displayed on the plot.
- (11) A legend shall be provided which indicates the various symbols used and their meanings.
- (12) Milestone Activity shall be indicated by a prominent symbol.
- (13) Different line types shall indicate the critical path and completed Milestone and activities.

g. Review and Approval. The Engineer will review a submitted preliminary schedule for approval or rejection within five State Business Days of receipt and will thereafter return same to the party having submitted it. There will, in turn, be allotted ten State Business Days for review and approval or rejection by the Engineer of the submitted baseline schedule, which will thereafter be returned to the party having submitted it. The Engineer will review revised preliminary or revised baseline submittals within five State Business Days of receipt. The time periods set forth in this paragraph are provided for scheduling purposes only. The Department reserves the right to enlarge such time periods for review by a reasonable amount of time where circumstances necessitate, within the sole discretion of the Engineer.

h. Updating and Revisions.

- (1) Within ten State Business Days after review by the Engineer, all preliminary and baseline schedules that are not approved shall be revised and resubmitted by the Contractor until the Engineer's approval is received.

- (2) The Contractor shall update the CPM schedule monthly whether or not the Engineer has accepted the schedule, to reflect actual activity progress. The update shall include the historical record of actual start and actual finish dates for activities in progress, or completed, and the remaining duration based on the amount of workdays required to complete the activity.
- (3) Monthly progress meetings shall be held. The updated CPM schedule shall be the basis for the monthly progress review meetings. Activity progress shall be prepared in advance of the meeting. At this meeting, attended by the Engineer, all progress during the calendar month shall be presented and reviewed for incorporation into the schedule by the Contractor. Within a period of ten State Business Days from the date of this progress meeting, the Contractor shall submit the schedule update to the Engineer with the agreed upon changes.
- (4) The monthly schedule update submission shall consist of three copies of electronic format on floppy diskettes or compact disks and three copies of the following:
 - (a) Updated CPM schedule reports (see Item e. above).
 - (b) Layout output. (See item f. above)
 - (c) CPM progress narrative.

The CPM progress narrative report submitted as part of the update analysis shall include, but not be limited to, the:

1. Description of schedule status.
 2. Discussion of current and anticipated delaying problem areas and their estimated impact.
 3. Schedule slippage, pay revisions, and/or progress along the critical path in terms of days ahead or behind the allowable dates, and if the Work is behind schedule, progress along other paths with negative float. This shall be in addition to and not a substitute for requirements in Subsection 108.11.
 4. Logic changes and an explanation of the revisions. Revisions to activities not worked on during the period, including changes in duration, or revisions to activity relationships are to be considered logic revisions. Out-of-sequence activities are not acceptable and shall be corrected in logic revisions prior to submission to the Department.
 - (5) When, in the Engineer's opinion, the CPM schedule fails to reflect the Contractor's actual plan and method of operation, or the Contractor's completion date as indicated by the CPM is more than one month behind the Contract completion date, the Engineer may require the Contractor to submit for review within ten State Business Days, a recovery plan for completion of the remaining work within the Contract completion date. A recovery plan shall include, but not be limited to, a revised CPM schedule and additional manpower and equipment that shall be utilized to complete the project by the date of Completion.
 - (6) When the Contractor adds activities that are not Extra Work Items to the CPM schedule, they shall be added in a method that completion dates of any succeeding baseline activities are not affected. All revisions shall be submitted to the Engineer for approval before incorporation into the CPM schedule.
 - (7) The Engineer shall have the right, within its sole discretion, to prepare its own update(s) or revision(s) to the baseline schedule in the event of a dispute between the parties regarding the appropriateness of the submitted revision(s) or updates to the baseline schedule or by reason of a failure on the part of the contractor to prepare same, which update(s) or revision(s) may reflect what the Engineer has determined to be the actual status of the project progress, actual sequencing of the Work and appropriate scheduling logic required under this Subsection. The Engineer may thereupon rely on its own revision(s) or update(s) of the baseline schedule in the administration of the project, review of claims and/or the imposition of liquidated damages.
- i. **Changes and Delays.** To ensure that the CPM schedule continues to accurately reflect the Contractor's plan for the Work and that it incorporates the impact of all changes and delays as soon as the Work scope can be defined, the Contractor shall use the following procedure to incorporate changes and delays.

When Extra Work or a change is proposed or claimed, the Contractor shall submit a Time Impact Evaluation form. Each Time Impact Evaluation must identify in a CPM fragnet sketch, additional work required as a result of the proposal and its interrelationship to the CPM schedule. Each change or delay shall be represented by adding a new activity or activities. These activities shall be clearly identified. This sketch shall show all activities, logic revisions, duration changes, and new activities with all the predecessors and successors. The Time Impact Evaluation form shall also include any associated cost

changes for performing the Work in question. Upon the Engineer's approval of the Time Impact Evaluation, the Contractor shall incorporate the fragnet's illustrating the influence of changes and delays into the baseline schedule and the working schedule in the next schedule update. An extension of time may only be considered when the Time Impacted scheduled completion date exceeds the date of Completion. For cases where the Contractor is behind schedule, an extension will be granted for only the amount of time that the Department is responsible as supported by a Time Impact Evaluation. In the event of a dispute, the Engineer may prepare an update, which is believed to be the true impact on the project. No additional compensation will be paid to the Contractor for preparing these revisions. Any request for extension of time shall be verified by CPM analysis and shall be in accordance with Subsection 108.11. Compensation for additional expense to the Contractor and allowance of additional time for completion of the Work shall be as set forth in a Construction Order in accordance with Subsections 108.11 and 109.03.

2. **Staging.** The Contractor shall schedule the Work using such procedures and staging as may be specified in the Contract Documents. Work designated as part of separate stages may be performed simultaneously where provided by the Contract Documents or where approved.

When the Contract Documents provide for staging or specific procedures, the Contractor may present, for written approval of the Engineer, a detailed, written alternate staging plan or procedure which incorporates the requirements of the Department. If the Contractor proposes an alternate-staging plan, two CPM schedules shall be submitted. One based on the original staging and one based on the Contractor's alternate staging. As a condition of the Engineer's reviewing of the alternate staging plan or procedure, the Contractor agrees that it is not entitled to additional Contract Time or compensation arising from possible delays to construction due to the time spent in reviewing the Contractor's staging plan or procedure, regardless of whether the Department accepts or rejects it. The Engineer will review and approve or reject and or return, with comments, the staging plan within ten State Business Days. If such staging plan or alternate procedure is approved in writing, the Contractor shall then finalize the progress schedule consistent with the alternate approved staging.

3. **Prosecution of the Work.**

- a. At or prior to the preconstruction conference, the Contractor shall furnish the name and location of the solid waste facilities to be utilized as well as the fee structure of each of the facilities. Failure to provide such information shall make the Contractor ineligible for adjusted compensation as provided for in Subsection 104.07.
- b. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the Completion of the Project in accordance with the Contract Documents and within the time set forth under Subsection 108.10.
- c. The Contractor shall supply the Engineer with a weekly work schedule indicating the Contractor's planned work, the subcontractor's planned work, the dates when materials and submissions are to be delivered, and a forecast of lane closings.
- d. The Contractor shall notify the Engineer, in writing, prior to discontinuing work for any reason and at least 24 hours in advance of resuming operations.
- e. The Contractor shall arrange and prosecute the Work so that each successive construction operation at each location shall follow the preceding operation as closely as the requirements of the various types of construction permit.
- f. Underground structures for traffic signals, except for pressure detector installations shall be constructed prior to completion of the intersecting road.
- g. Work, which closes or alters the use of existing roadways shall not be undertaken until adequate provisions, conforming to the requirements of Section 617, have been made by the Contractor and approved.
- h. The Engineer may revise stage construction and maintenance of traffic, if deemed necessary, by the Engineer due to unforeseen circumstances that may arise during construction.
- i. When possible, the construction of subsurface structures adjacent to traffic shall be performed while traffic is being diverted from such areas. If traffic must be maintained in such areas, the Work shall be done expeditiously in stages, as approved, and with minimum interference with traffic.
- j. Subsurface structure excavation adjacent to traffic shall not remain open overnight unless adequately protected by approved safety devices.
- k. The Contractor shall proceed with the Work of demolition of the various buildings that are identified with a demolition number as and when they become available for demolition. If any of the buildings to be demolished is not available for demolition at the time the Contractor begins work on the Project, the

Contractor shall temporarily defer its work in the vicinity of the building and complete the Work when the building is made available for demolition.

- l. Operations adjacent to traffic shall be confined to only one side of the traffic at any one time unless otherwise specified in the Contract Documents.
- m. Concrete curbs constructed adjacent to flexible base and surface courses shall be completed, cured, and backfilled before the flexible base and surface courses are constructed.
- n. Bituminous paving operations shall be staged to progress up to the bottom of the surface course. The top layer of the bituminous concrete surface course for the full width of the traveled way, shoulder, and auxiliary lanes shall be paved as a single stage of construction and as the final paving operation.

4. **Acceleration and Default.** If, in the opinion of the Engineer, the Contractor falls behind its baseline schedule, and cannot complete the Work within the time prescribed under Subsection 108.10, as modified pursuant to Subsection 108.11, the Contractor shall take such steps as may be necessary to improve its progress. The Engineer may require the Contractor to increase the number of shifts, begin overtime operations, work extra days including weekends and holidays, or supplement its construction plant and to submit for approval such supplementary schedule or schedules, as may be deemed necessary to demonstrate the manner in which the agreed rate of progress shall be regained, all at no cost to the State.

Failure of the Contractor to comply with the requirements of the Engineer under this Subheading is grounds for the determination that the Contractor is not prosecuting the Work with such diligence as to ensure Completion within the time specified. Upon such determination, the Engineer may terminate the Contractor's right to proceed with the Work or any separate part thereof in accordance with Subsection 108.17.

5. **Intent, Responsibility, and Time.** Scheduling of construction shall be the responsibility of the Contractor. The Contractor's shall determine the most feasible order of work commensurate with the Contractor's abilities and the Contract Documents. The CPM schedule will be used for determining extensions or reductions of Contract Time pursuant to Subsection 108.11.

It is not intended that the Engineer, by approving the CPM schedule, agrees that it is reasonable in any or all respects or that following the CPM schedule can result in timely completion of the Project. The progress schedule is not a part of the Contract.

If, in the preparation of the CPM schedule, the Contractor reflects a completion date different than that specified under Subsection 108.10, this in no way voids the date set therein. The date as specified in that Subsection governs. Where the CPM schedule reflects a completion date earlier than that specified as the Contract Time, the Engineer may approve such schedule with the Contractor specifically understanding that no claim for additional Contract Time or compensation shall be brought against the State as the result of failure to complete the Work by the earlier date shown on the CPM schedule.

6. **Payment.** Payment for the accepted progress schedule will be made on a lump sum basis for the costs for schedule preparation, maintenance, updating, facilities, personnel, computer hardware and software requirements, schedule submittals and reproduction as specified. Twenty-five percent of the lump sum bid will be paid upon approval of the baseline submission, and the balance paid on approval of updates at a prorated sum based upon the number of anticipated updates to be submitted during the Contract Time.

Payment will be made under:

Pay Item

PROGRESS SCHEDULE

Pay Unit

LUMP SUM

108.05 Mobilization.

THIS SUBSECTION IS CHANGED TO:

Mobilization shall consist of the preparatory work and operations necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site, and other work performed or costs incurred prior to beginning Work.

Payment for mobilization will be made on a lump sum basis regardless of the fact that the Contractor may have, for any reason, shut down its work on the Project or moved equipment away from the Project and back again.

Payment will be made in accordance with the following schedule:

1. When five percent of the Work is completed and the Baseline Progress Schedule is approved by the Engineer, 25 percent of the lump sum bid for mobilization or 2.5 percent of the Total Contract Price, whichever is less, will be paid.

2. When ten percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 50 percent of the lump sum bid for mobilization or five percent of the Total Contract Price, whichever is less, will be paid.
3. When 15 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 75 percent of the lump sum bid for mobilization or 7.5 percent of the Total Contract Price, whichever is less, will be paid.
4. When 20 percent of the Work is completed and all required CPM Progress Schedule Updates are approved by the Engineer, 100 percent of the lump sum bid for mobilization or ten percent of the Total Contract Price, whichever is less, will be paid.
5. When all Work on the Project is complete, payment for the lump sum bid for mobilization in excess of ten percent of the Total Contract Price will be made.
6. The percentage of Work completed shall be the total of payments earned compared to the Total Contract Price. The total of payments earned excludes the amount paid for this item and the amount paid for materials furnished but not incorporated into the Work in accordance with Subsection 109.06, as shown on the monthly estimates of the approximate quantities of Work performed, prepared in accordance with Subsection 109.05.
7. No payment will be made for mobilization until a Baseline Schedule is approved, except when all Work on the Project is complete, then 50 percent of the lump sum bid for mobilization will be paid and no further payment(s) will be made for the lump sum bid for mobilization.

Payment will be made under:

| <i>Pay Item</i> | <i>Pay Unit</i> |
|-----------------|-----------------|
| MOBILIZATION | LUMP SUM |

When mobilization is not a Pay Item, all costs for the Work shall be included in the prices bid for various Pay Items scheduled in the Proposal.

108.06 Limitation of Operations

THE FOLLOWING IS ADDED:

The Work pertaining to Stage II as designated in the Construction Plans shall not begin before April 14, 2005.

108.10 Time of Completion.

- A. All work required for Substantial Completion of the Project shall be completed on or before October 11, 2005.
- B. The entire Work of the Project shall be completed on or before December 12, 2005.
- C. All work resulting in the closure or detour of Woods Road shall be completed in 30 Calendar Days.

108.11 Extensions and Reductions of Contract Time.

THIS SUBSECTION IS CHANGED TO:

A. Basis for Extension. Where appropriate under the provisions of this Subsection, extensions or reductions to the Contract Time may be provided by Construction Order, however, such extensions or reductions will be allowed only to the extent that the increase or decrease in the Work or delays of the types indicated below affect current controlling operations and the overall Completion. Increases or decreases in Work or such delays, which do not affect the overall Completion, are not to be the basis for reduction or extension of Contract Time. Extensions of Contract Time will not be granted under this Subsection where it is determined that the Contractor could have avoided the circumstances which caused the request for extension.

If the Contractor is delayed in completion of the Work by reason of changes made under Subsection 104.02, or by failure of the Department to acquire right-of-way, or by any act of other contractors consistent with Subsection 105.10, or due to the discovery of archeological finds consistent with Subsection 108.13, or the discovery of hazardous substances, or by any act of the Engineer or of the Department not contemplated by the Contract, an extension of Contract Time commensurate with the delay in overall completion of the Contract thus caused will be granted, and the Contractor is relieved from any claim for liquidated damages or engineering and inspection charges.

Additionally, the Contractor may be granted an extension of Contract Time and not be assessed liquidated damages or the costs of engineering and inspection for any portion of the delay in overall completion of the Work beyond the time provided in Subsection 108.10 caused by the following reasons:

1. acts of civil or military authorities, war, or riot;
2. fire;
3. floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon (except on working day contracts);
4. extreme weather conditions (see Item 1 of the fourth paragraph) (except on working day contracts);
5. epidemics or quarantine restrictions;
6. strikes or labor disputes beyond the control of the Contractor which prevent work on the construction operations which are critical to the completion of the Project;
7. shortages of materials (see Item 2 of the fourth paragraph) or freight embargoes;
8. acts of the State in its sovereign capacity;
9. failure of the Engineer to furnish interpretations of the Contract Documents (see Item 3 of the fourth paragraph).

B. Criteria for Evaluation. Extension of Contract Time for the reasons set forth in this Subsection will not be granted unless the Contractor has notified the Engineer in writing of the causes of delay within 15 State Business Days from the beginning of any such delay on forms provided by the Department. The Engineer will evaluate the facts and the extent of the delay, and the Engineer's findings will be final and conclusive and will be based on the following:

1. Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following:

| Number of Days the Contractor's Work is Limited to in One Month as the Result of Extreme Weather Conditions (April through November inclusive) | Extension of Contract Time Allowable |
|---|---|
| 16 - 31 | 0 |
| 15 | 1 |
| 14 | 2 |
| 13 | 3 |
| 12 | 4 |
| 11 | 5 |
| 10 | 6 |
| 9 | 7 |
| 8 | 8 |
| 7 | 9 |
| 6 | 10 |
| 5 | 11 |
| 4 | 12 |
| 3 | 13 |
| 2 | 14 |
| 1 | 15 |
| 0 | 16 |

Extensions of Contract Time for extreme weather conditions will be granted in accordance with the following for the months of December through March inclusive:

It is anticipated that the average number of total Working Days during this four month winter period is 5 for road work (Exclusive of temperature sensitive work, for example but not limited to, paving operations, earthwork, aggregates, curb and sidewalk, etc.) and 10 for bridge work and retaining wall construction (Exclusive of temperature sensitive work, for example but not limited to, concrete decks, parapets, bridge repairs, bridge painting, etc.)

In using the above, the Engineer will:

- a. Consider days for which an extension is granted under the above category "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor's work is limited as the result of these extreme weather conditions;

- b. Consider days for which an extension is granted under the above categories for causes other than "floods, tidal waves, earthquakes, cyclones, tornadoes, hurricanes, or other cataclysmic natural phenomenon" as days on which the Contractor worked and was unaffected by extreme weather conditions; and
 - c. Make the above calculation based on the full number of days in the calendar month as being days on which the Contractor could have worked without regard to Saturdays, Sundays, and holidays.
 - d. Extension of time for extreme weather conditions will only be granted when the Critical Path of the Progress Schedule is affected and documented by the contractor in accordance with Subsection 108.04. No extension of time will be granted unless the Contractor submits daily documentation of such extreme weather.
- 2. Extensions of Contract Time will not be granted for a delay caused by a shortage of materials unless the Contractor furnishes:
 - a. Documentary proof that it has diligently made every effort to obtain such materials from all known sources within reasonable distance from the Work, and
 - b. Further proof in the form of a progress schedule, as required in Subsection 108.04, showing that the inability to obtain such materials when originally planned, did, in fact, delayed the date of Completion which could not be compensated for by revising the sequence of the Contractor's operations. The term "shortage of materials" applies only to raw and fabricated materials, articles, parts, or equipment which are standard items and does not apply to materials, parts, articles, or equipment which are processed, made, constructed, fabricated, or manufactured to meet the specific requirements of the Contract. Only the physical shortage of materials and not the cost of materials will be considered.
- 3. Extensions of Contract Time will not be granted for failure of the Engineer to furnish interpretations of the Contract Documents until 20 State Business Days after receipt of such demand in writing as required by Subsections 105.01 and 105.07, and not then unless such request for an interpretation of the Contract Documents is reasonable and made in good faith, and the failure to respond was unwarranted.
- 4. It is understood and agreed that the Contractor has considered in its bid all of the permanent and temporary utility facilities in their present or relocated positions as may be shown on Plans, as described in Specifications and as revealed by its site investigation; is aware that utility company service demands, adverse field conditions and emergencies may affect the owner's ability to comply with the proposed schedules for utility work; and is cognizant of the limited ability of the State to control the actions of the utility companies, including the actions of railroads, and has made allowances in its bid. Extensions of Contract Time will be granted for extreme weather and exigent circumstances only, as specifically set forth above and which are outside the control of the respective utility company(ies) or the Contractor as determined by the Engineer utilizing the Extreme Weather provisions specified in 1. above. Extension of time for utility work will only be granted when the Critical Path of the Progress Schedule is affected and documented by the Contractor in accordance with Subsection 108.04.

Except where specifically provided in the Contract Documents, the Contractor shall not make any claim for damages or additional compensation for any delay in or hindrance to the performance of the Contract occasioned by any act or omission to act by the State or any of its representatives, or for any of the reasons enumerated in this Subsection and agrees that any such claim shall be fully compensated for by an extension of Contract Time to complete performance of the Work.

Extensions of Contract Time will not be granted due to delays caused by, or in any way related to, the financial condition of the Contractor, subcontractors, sub-subcontractors, material, men, fabricators, or suppliers. The Contractor and its surety assume full responsibility for ensuring that the financial condition of any of the above does not delay completion of the Contract.

If, as a result of modifications made under Subsection 104.02, 104.05, 104.06, or 108.09, the Work required is reduced or altered so that the time required for Completion is reduced, the Engineer may reduce the Contract Time provided under Subsection 108.10. The Engineer will evaluate the facts and the extent of the reduction. The Engineer's findings thereon will be final and conclusive.

It is the intention of the above provisions that the Contractor or surety is not relieved of liability for liquidated damages or engineering and inspection charges for any period of delay in Completion in excess of that expressly provided for in this Subsection.

108.12 Right-Of-Way Delays.

THE TITLE OF THIS SUBSECTION IS CHANGED TO:

108.12 Right-Of-Way Information and Delays.**108.12 Right-Of-Way Information and Delays.**

THE FOLLOWING IS ADDED:

The Contractor shall obtain from the Engineer all information regarding ROW Parcels and Easements acquired for the Project as well as the nature and type of title acquired. The Contractor shall make periodic requests for updates to this information during the course of the Contract.

The Contractor shall not enter an Easement until the Resident Engineer provides written notice to the property owner. The Contractor shall provide written notice to the Resident Engineer, 30 calendar days prior to entering a particular Easement or right, which is lesser than a fee interest. The Contractor shall make no claim for delays by reason that entry upon an Easement or right which is lesser than a fee interest is conditioned upon notice or is limited in duration; the Contractor is required to schedule accordingly and take such limitations into account when planning performance of the Work.

Temporary Easements and/or temporary construction rights will in most cases contain a limitation as to the length of time that they are extant. The Contractor shall schedule the Work pursuant to Subsection 108.04 so as to accommodate the particular time limitations of an Easement or right which is lesser than a fee interest as reflected on the R.O.W. plans. The Contractor shall provide a written request to the Engineer that the Department procure an extension from the owner of a particular temporary easement or right, which is lesser than a fee simple interest, so as to enable the Contractor to continue occupancy of or re-enter same in the future, beyond the initial time period set forth in the respective property description prior to the expiration thereof.

Where the Contractor fails to complete the work within an area of a temporary easement or right lesser than a fee interest during the time allowed under the property description, by reason of the Contractor's own fault; the Contractor shall reimburse the State for the sum payable to the owner of the underlying fee interest for the extended period of occupancy use. The Resident Engineer may deduct an amount equal to such payments from the monthly estimate of the Work performed after providing 30 day written notice to the Contractor of such action, including a breakdown of the costs sought or to be sought by reason of the delay in timely vacating a temporary easement or right lesser than a fee interest.

The following is a list of all rights-of-way that have not been secured and their approximate anticipated dates of availability:

Properties and Vacation/Availability Dates

| <u>Demolition and/ or Parcel No.</u> | <u>Approximate Baseline Station</u> | <u>Offset/Direction</u> | <u>Date</u> |
|---|--|--------------------------------|--------------------|
| 11A | Station 1+720 | Left | 11/01/03 |
| AE11 | Station 1+735 | Left | 11/01/03 |

108.16 Failure to Complete on Time.

LIQUIDATED DAMAGES SHALL BE AS FOLLOWS:

1. For each Calendar Day that the Contractor fails to complete Construction Operations, as specified in Item A of Subsection 108.10 of these Special Provisions, for Substantial Completion, the Contractor shall pay liquidated damages consisting of Road User Costs and Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of \$ 2,000.00.
2. For each Calendar Day that the Contractor fails to complete the entire Work of the Project as specified in Item B of Subsection 108.10 of these Special Provisions, for Completion, the Contractor shall pay liquidated damages consisting of Construction Engineering Costs, as defined in Subsection 101.03, to the State in the amount of \$ 750.00, provided that Construction Operations as specified for Substantial Completion are actually completed.

3. For each Calendar Day that the Contractor fails to complete work as specified in Item C of Subsection 108.10 of these Special Provisions, the Contractor shall pay liquidated damages to the State in the amount of \$ 800.00.

The days in default set forth above are the number of Calendar Days in default when the time for Completion is specified on the basis of Calendar Days or a specified completion date, and are the number of Working Days in default when the time for Completion is specified on the basis of Working Days.

Anytime after the Engineer notifies the Contractor in writing, that Substantial Completion of the Project has been actually achieved, the Commissioner may elect, to waive the imposition of liquidated damages under paragraph number 2 above and, in lieu thereof, require the Contractor to pay the actual costs incurred by the State for engineering, inspection, and administration (including overhead) between the actual date of Substantial Completion or such subsequent date as the Commissioner may determine and the actual date of Completion of all Work, as established by the Certificate of Completion. The Contractor hereby waives the right to challenge this election by the Commissioner on the grounds that such costs exceed the amount of liquidated damages specified in Subsection 108.16, Subpart 2.

The Commissioner will recover all damages specified above by deducting the amount thereof from any monies due or that may become due the Contractor, or from the Contractor or from its surety.

108.19 Lane Occupancy Charges.

THE FOLLOWING IS ADDED:

The rate or rates to be applied in the calculation of a Lane Occupancy Charge shall be in accordance with the following:

| <u>Description</u> | <u>Rate per Minute per Lane</u> |
|--|---------------------------------|
| Overrun of "Alternating Traffic" Time Limits | \$20.00 |

SECTION 109 – MEASUREMENT AND PAYMENT

109.03 Force Account Payment.

5. **Profit.** Profit shall be computed at ten percent of the following:

SUBPART C. IS ADDED AS FOLLOWS:

- c. Total fringe benefits on total direct labor cost as computed above.

6. **Overhead.**

THE FIRST SENTENCE IS CHANGED TO:

Any and all overhead for the Contractor is defined to include the following:

THE FIRST SENTENCE OF THE SECOND PARAGRAPH IS CHANGED TO:

Any and all overhead costs of the Contractor for Force Account work shall be computed at 15 percent of the following:

109.07 Payment Following Substantial Completion.

SUBPART 1 OF THE FIRST PARAGRAPH IS CHANGED TO:

1. Each subcontractor or supplier has been promptly paid any amount due from any previous progress payment and shall be paid any amount due from the current progress payment, including all retainage withheld from the subcontractor or supplier, within 14 days of the receipt by the Contractor of payment from the Department; or

DIVISION 200 - EARTHWORK

SECTION 201 - CLEARING SITE

201.12 Basis of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

Payment for the Pay Item "Clearing Site" in excess of \$ 30,000.00 will not be made until Completion.

SECTION 202 - ROADWAY EXCAVATION

202.09 Milling of HMA.

2. Construction Requirements.

THE FOLLOWING IS ADDED AFTER THE NINTH PARAGRAPH:

Milled areas shall not be left unpaved for longer than 72 hours, unless approved by the Engineer.

202.15 Basis of Payment.

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH.

Separate payment will not be made for Sawcutting when used with the Pay Items "Joint Removal" or "Removal of Concrete Base Course and Concrete Surface Courses".

SECTION 207 – SUBSURFACE STRUCTURE EXCAVATION

207.03 Bedding Materials.

SUBSECTION HEADING IS CHANGED TO:

207.03 Bedding and Backfill Materials.

207.03 Bedding and Backfill Materials.

THE FOLLOWING IS ADDED:

Controlled Low Strength Material (CLSM) shall conform to Subsection 919.22

207.06 Backfilling.

A. Pipes and Culverts.

THE FOLLOWING IS ADDED AFTER THE FOURTH PARAGRAPH:

CLSM may be used as alternate backfill material when backfilling trenches for drainage pipe and utility conduit. Combining other backfill materials in the same trench as CLSM shall not be permitted. Mixing and placement of CLSM shall begin only when the ambient temperature is at least -1 °C. During placement, the CLSM mixture shall have a temperature of at least 5 °C and shall not be placed on frozen ground. The CLSM mixture shall be discharged directly from the truck into the trench to be filled with care taken to prevent the pipe from becoming displaced. After placement, the CLSM mixture shall be cured and protected to prevent damage from cold weather according to Subsection 405.14. CLSM shall not be used to replace pavement, base courses or drainage layers that form the structure of the roadway.

207.09 Basis of Payment.

THE THIRD AND FOURTH PAY ITEMS ARE CHANGED TO:

ROCK EXCAVATION, SUBSURFACE STRUCTURES
PIPE BEDDING, CLASS ____

CUBIC METER
CUBIC METER

SECTION 212 – SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING IS ADDED TO THIS SECTION

TIMBER DRIVEWAY MATTING

Description

The work under this item shall consist of the furnishing and installation of timber driveway matting for use as a stable work environment for the construction of retaining walls at locations indicated on the construction plans consisting of wetlands, transition areas and general wet areas.

Materials

Materials shall conform to Section 918.

Construction

The timber driveway matting shall be wood mats consisting of squared timber cabled close together and placed within the work area. The squared timbers shall be a minimum of 150 millimeters square or as required to support the expected loading from the construction equipment utilized. The length of the squared timbers shall be a minimum of 3.6 meters and shall be situated to fit within the confines of the temporary construction and permanent maintenance easements along the work to serve the intended purpose. A 6.35 millimeter diameter hole shall be drilled approximately 300 to 600 millimeters from each end of each timber. To connect the timbers together, a 5 millimeter galvanized steel cable shall be threaded to the holes and looped at each end (for ease of transport). Matting shall be installed in a continuous strand or in prefabricated sections at the contractor's discretion. If needed to reduce movement, separate sections of prefabricated wood matting shall be connected together. The timber matting shall be sized for construction loads and soil strength. Root mats of vegetation shall not be disturbed during installation, operation upon or removal of the timber driveway matting. Upon completion of all work requiring timber driveway matting, all such matting placed shall be removed by the contractor.

Method of Measurement

Timber Driveway Matting will be measured by the square meter.

Basis of Payment.

Payment will be made under:

Pay Item

TIMBER DRIVEWAY MATTING

Pay Unit

SQUARE METER

Separate payment will not be made for any excavation, grading, embankment or geotextile required for the placement of the timber driveway matting. Separate payment will not be made for the timber preparation, such as drilling of holes, or for the cable and cable ties required for construction. Separate payment will not be made for replacement of damaged matting or removal of matting upon completion of work. Any damage to matting by equipment to be repaired/replaced by the contractor at the contractor's expense.

DIVISION 300 - BASE COURSES

SECTION 301 - SOIL AGGREGATE BASE COURSE AND DENSE-GRADED AGGREGATE BASE COURSE

301.05 Compaction.

3. Waiving Standard Compaction Requirements.

THE FOLLOWING IS ADDED AFTER THE FIRST PARAGRAPH:

The compaction requirements in Subsection 301.05, Subparts 1 and 2, are waived.

DIVISION 400 - SURFACE COURSES

SECTION 404 – HOT MIX ASPHALT (HMA)

404.05 Plant Laboratory.

ITEM 23. OF THE FIFTH PARAGRAPH IS CHANGED TO:

23. Microcomputer and workstation requirements shall be according to Subsection 106.06.

404.06 Vehicles for Transporting HMA Mixtures.

THE ENTIRE SUBSECTION IS CHANGED TO:

The mixture shall be transported from the mixing plant to the Project in trucks equipped with tight, clean bodies, which may be lightly coated with a soap or lime solution, or other such non-petroleum-based release agent. Under no circumstance shall a petroleum-based product be used as a release agent.

The trucks shall be permanently equipped with an airfoil that is capable at any speed or under any weather conditions to deflect air over the tarp and to prevent air from going under the tarp. The airfoil will be affixed no more than 600 millimeters in front of the tarp roll and be at least as high as the top of the tarp roll.

Each truckload shall be covered immediately after loading at the plant with a waterproof tarpaulin of such size to protect the mixture from the weather. The tarpaulin shall be able to withstand normal handling and placement temperatures of up to 205 °C without endangering the structural integrity and serviceability of the fabric. The tarpaulin shall also comply with one of the following:

1. A heavyweight tarpaulin to completely drape the load. The heavyweight tarpaulin shall have a minimum weight of 0.61 kg/m² and shall be a minimum of 600 millimeters wider and 1.2 meters longer than the truck body. The heavyweight tarpaulin shall securely meet or overlap the top of the tailgate and be securely held in place so as to prevent air from lifting the tarp during transport.
2. A tarpaulin equipped with side and back flaps sufficient to lap down outside along the sides and rear of the truck bed a minimum of 300 millimeters. The tarpaulin shall be secured by tie downs at a maximum of 1.5 meter spacing along the sides and rear of the truck.

The truck bodies shall be insulated or heated as necessary, to ensure delivery of the mixture at the specified temperature. Any truck that: causes excessive segregation of the mixture by its suspension or other contributing factors; leaks; causes delays; does not have an airfoil; or does not have an approved tarpaulin shall be removed from the work until such conditions are corrected and the truck is presented for inspection to the Engineer. The Engineer may require that all vehicles for transporting HMA mixture to be used by the contractor be made available for inspection at the plant laboratory prior to any shipments of materials.

404.07 Materials Transfer Vehicle (MTV)

THE ENTIRE SUBSECTION IS CHANGED TO:

The MTV shall independently deliver mixtures from the hauling equipment to the paving equipment. A paver hopper insert with a minimum capacity of 12.7 megagrams shall be installed in the hopper of conventional paving equipment when an MTV is used.

As a minimum, the MTV shall have a high capacity truck unloading system which will receive mixtures from the hauling equipment; a storage system in the MTV with a minimum capacity of 13.6 megagrams of mixture; and a discharge conveyor, with the ability to swivel to either side, to deliver the mixture to the paving spreader while allowing the MTV to operate from an adjacent lane. In addition, the paving operation must contain a remixing system to continuously blend the mixture prior to placement. The remixing may be done by the MTV or in the paver hopper.

Use of MTV may not be necessary on all projects. Refer to the Special Provisions to determine if its use is either mandatory or optional. If an MTV is to be used on the Project the Contractor shall further investigate the possible movement of the fully or partially loaded MTV on the Project. If there are any structures on the Project that the fully or partially loaded MTV will traverse, the Contractor shall request an Overweight Permit Check from the Structural Evaluation Unit. Such request, including the axle configuration and weights, and the Project limits, shall be made in writing in a fax to (609) 530-4444 and operations shall not be started until this permission is received from the Department and one copy forwarded to the Resident Engineer.

A materials transfer vehicle (MTV) is optional for the construction of the pavement.

404.25 Method of Measurement.

THE SIXTH FULL PARAGRAPH FROM THE LAST IS CHANGED TO:

The basic asphalt price index will be the monthly asphalt price index published during the month of Advertisement.

THE EIGHTH AND NINTH PARAGRAPHS ARE CHANGED TO:

Sealing of Cracks in HMA surface course will be measured by the linear meter.

Sawing and sealing joints in HMA overlays will be measured by the linear meter. Sawing joints in base or intermediate course will be measured by the linear meter.

404.26 Basis of Payment.

THE NINTH AND THIRTEENTH PAY ITEMS IN THE FIRST PARAGRAPH ARE CHANGED TO:

| | |
|--|------|
| SAWING JOINTS IN INTERMEDIATE OR BASE COURSE | |
| CORE SAMPLES, HOT MIX ASPHALT | UNIT |

THE FOLLOWING PAY ITEM IS DELETED:

| | |
|--|--------------|
| SEALING OF CRACKS AND JOINTS IN HOT MIX ASPHALT SURFACE COURSE | LINEAR METER |
|--|--------------|

THE NINTH PAY ITEM IS CHANGED TO:

| | |
|--|--------------|
| SAWING JOINTS IN INTERMEDIATE OR BASE COURSE | LINEAR METER |
|--|--------------|

THE LAST PARAGRAPH IS CHANGED TO:

Separate payment will not be made for MTV, test strips, and quality control for compaction, including comparison cores, and nuclear density testing. All costs thereof shall be included in the prices bid for Hot Mix Asphalt Surface Course ____, Hot Mix Asphalt Intermediate Course ____, and Hot Mix Asphalt Base Course ____.

SECTION 406 – SUPERPAVE HOT MIX ASPHALT COURSES

406.13 Surface Course Rideability Requirements.

For this Project, the no payment reduction provisions shall govern.

406.19 Basis of Payment.

THE LAST PARAGRAPH IS CHANGED TO:

Separate payment will not be made for MTV, test strips, and quality control for compaction, including comparison cores, and nuclear density testing. All costs thereof shall be included in the prices bid for Superpave Hot Mix Asphalt ____ Surface Course, Superpave Hot Mix Asphalt ____ Intermediate Course, and Superpave Hot Mix Asphalt ____ Base Course.

DIVISION 500 - BRIDGES AND STRUCTURES

SECTION 519 - PREFABRICATED MODULAR WALLS

519.01 Description.

Prefabricated Modular Wall Systems acceptable for use in the project are as follows:

DOUBLEWAL as manufactured by
The Doublewal Corporation
7 West Main Street
Plainsville, CT 06062
Telephone Number: 860-747-1627

T-WALL as manufactured by
The Neel Company
8328-D Stratford Lane
Springfield, VA 22152
Telephone Number: 703-913-7859

519.03 Construction

A. Fabrication and Curing.

THE FIFTH SENTENCE IS CHANGED TO:

The finish for the front face shall be "fractured fin" with 25mm overall relief and a 50mm center-to-center fin spacing.

DIVISION 600 - INCIDENTAL CONSTRUCTION

SECTION 602 - PIPES

602.11 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE DELETED:

| | | |
|---------------------------------------|--|--------------|
| <input checked="" type="checkbox"/> X | MM REINFORCED CONCRETE CULVERT PIPE ARCH, CLASS ____ | LINEAR METER |
| <input type="checkbox"/> X | MM REINFORCED CONCRETE SEWER PIPE ARCH, CLASS ____ | LINEAR METER |

THE FOLLOWING IS ADDED TO THIS SECTION

450MM COMBINATION DRAIN

Description

The work under this item shall consist of the construction of 450mm Combination Drain at the locations specified on the plans or as directed by the Engineer.

Materials

Materials shall conform to Subsection 603.02 and the following:

Coarse aggregate backfill shall conform to Subsection 901.03.

Geotextile shall conform to Subsection 919.06.

Construction

Construction shall conform to Subsections 602.03, 602.04 and the following:

When the pipe trench is excavated, it shall be excavated to the limits as shown on the Construction Plans and Construction Details and then lined with geotextile material. 450mm reinforced concrete pipe is shall then be laid, unmortared, at the proper elevation and slope, and the trench backfilled with the specified coarse aggregate backfill to the lower limits of the topsoil or dense graded aggregate base course. The geotextile material shall then be folded over the top of the coarse aggregate backfill so that the stone and pipe is fully enclosed by the geotextile material. Minimum overlap of geotextile material shall be 450mm.

Method of Measurement

450mm Combination Drains will be measured by the linear meter except for the distance between inner faces of inlets and manhole walls. Pipes with sloped or skewed ends will be measured along the invert.

Basis of Payment.

Payment will be made under:

Pay Item

450MM COMBINATION DRAIN

Pay Unit

LINEAR METER

Separate payment will not be made for the geotextile fabric and coarse aggregate material required for combination drain construction.

SECTION 603 – INLETS AND MANHOLES

THE FOLLOWING IS ADDED TO THIS SECTION

STORMWATER TREATMENT CHAMBERS

Description

The work under this item shall consist of the placement of Stormwater Treatment Chambers of the types specified at locations indicated on the construction plans.

Materials

Materials shall conform to Subsection 603.02.

Construction

Construction shall conform to Subsections 603.03 through 603.09 and the following:

The Stormwater Treatment Chamber shall be capable of removing oil and sediment from the storm water during frequent wet weather events. The Stormwater Treatment Chamber shall treat a minimum of 75 to 90 percent of the annual runoff volume and be capable of removing 50 to 80 percent of the total suspended sediment load (TSS) and 60 to 95 percent of the floatable free oil. The Stormwater Treatment Chamber must be capable of trapping silt and clay size particles in addition to large particles. The Stormwater Treatment Chamber shall be installed underground as part of the storm sewer system and be structurally designed for MS-22.5 traffic loading at the surface. The storage in the Stormwater Treatment Chamber shall be vertically oriented. The Stormwater Treatment Chamber shall be maintainable from the surface via one access point without requiring entry into the device.

The Stormwater Treatment Chamber shall be manufactured by an experienced company with at least 5 years of experience in the practice, construction and testing of stormwater treatment facilities and structures. The Stormwater Treatment Chamber shall be equipped with an internal high flow bypass that regulates the flow rate into the device and conveys high flows directly to the outlet such that scour and/or re-suspension of material previously collected in the device does not occur. External bypasses are not acceptable. The bypass area shall be physically separated from the separation area to prevent mixing. The Stormwater Treatment Chamber shall be circular, and constructed from precast concrete risers. The concrete Stormwater Treatment Chamber shall be designed and manufactured in accordance with ASTM C-478. The concrete joints shall be oil resistant, watertight and meet the design criteria according to ASTM C-443. In the concrete Stormwater Treatment Chamber, a preformed stormwater sediment diversion insert shall be installed by the manufacturer and set monolithic with the structure prior to delivery. This diversion insert, sealed watertight to the inside of the bypass chamber, will divert low to normal stormwater flows into the treatment chamber. The first 405mm of oil storage shall be lined with fiberglass to prevent migration through pores of the concrete.

The difference between the inlet pipe elevation to the Stormwater Treatment Chamber and the outlet pipe elevation from the Stormwater Treatment Chamber shall be 25mm. For a multiple inlet pipe design, there shall be a 75mm difference between the inlet pipe inverts and the outlet pipe invert. The Stormwater Treatment Chamber shall be able to be used as a bend structure in the storm sewer system.

The Stormwater Treatment Chamber shall be installed in sections in the following sequence:

1. Aggregate Base
2. Base Slab
3. Treatment Chamber Section(s)
4. Transition Slab (if required)
5. By-Pass Section
6. Inlet/Outlet Pipe Connection
7. Riser Section and/or Transition Slab (if required)
8. Maintenance Riser Section(s) (if required)
9. Frame and Access Cover

The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations. Adjustments to the Stormwater Treatment Chamber shall be performed by lifting the upper sections free of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary. Once the Stormwater Treatment Chamber has been constructed, any lift holes must be plugged with mortar.

Inlet and outlet pipes should be securely set into the by-pass chamber using grout or approved pipe seals so that the structure is watertight. The manufacturer should be notified if the pipe is to be grouted in the field in lieu of approved pipe seals prior to fabrication.

The Stormwater Treatment Chamber shall be supplied with a cast iron frame and cover. Precast concrete adjustment units shall be installed to set the frame and cover at the required elevation. The adjustment unit should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames and covers shall be set in a full bed of mortar at the elevation specified.

The Contractor shall clean the Stormwater Treatment Chambers at both Substantial Completion and just prior to Final Acceptance. All cleanout work shall be done with the N.J.D.O.T. Maintenance Crew Supervisor on-site to review the Stormwater Treatment Chamber device cleanout procedure.

Method of Measurement

Stormwater Treatment Chambers will be measured by the unit of the specific type installed.

Basis of Payment.

Payment will be made under:

Pay Item

STORMWATER TREATMENT CHAMBER TYPE ____

Pay Unit

UNIT

No separate payment will be made for the cleaning of Stormwater Treatment Chambers. No separate payment will be made for the placement of the 150mm coarse aggregate layer base.

SECTION 612 – BEAM GUIDE RAIL

THE FOLLOWING IS ADDED TO THIS SECTION

BEAM GUIDE RAIL, CORE-TEN STEEL

Description

The work under this item shall consist of the installation of beam guide rail, core-ten steel and anchorages at the locations specified on the plans.

Materials

Materials shall conform to Subsection 612.02.

Construction

Construction shall conform to Subsections 612.03 through 612.06.

Method of Measurement

Beam Guide Rail, Core-Ten Steel will be measured by the linear meter along the face of the rail excluding anchorages and end terminals.

Slotted Guide Rail Terminals, Core-Ten Steel, Controlled Release Terminals, Core-Ten Steel, Controlled Release Terminal Anchorages and Beam Guide Rail Anchorages, Core-Ten Steel will be measured by the number of units installed.

Rub R ail, Core-Ten Steel will be measured by the linear meter along the face of rail.

Basis of Payment.

Payment will be made under:

Pay Item

BEAM GUIDE RAIL, CORE-TEN STEEL
 SLOTTED GUIDE RAIL TERMINALS, CORE-TEN STEEL
 CONTROLLED RELEASE TERMINALS, CORE-TEN STEEL
 CONTROLLED RELEASE TERMINAL ANCHORAGES, CORE-TEN STEEL
 BEAM GUIDE RAIL ANCHORAGES, CORE-TEN STEEL
 RUB RAIL, CORE-TEN STEEL

Pay Unit

LINEAR METER
 UNIT
 UNIT
 UNIT
 UNIT
 LINEAR METER

SECTION 617 - TRAFFIC CONTROL**617.02 Materials.**

THE ENTIRE SUBSECTION IS CHANGED TO:

Materials shall conform to the following Subsections:

Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape.....912.12
 Temporary Pavement Markers.....912.16

617.03 Traffic Control Devices.

3. **Illuminated Flashing Arrows.** The solar powered arrow boards approved for use on projects are:
- Work Area Protection – Arrowmaster Model WAAW-15-SB
 - Solar Technology Inc. – Silent Sentinel
 - Trafcon Industries Inc. – Model TC1-15S
 - Protect-O-Flash Inc. – Model No. M-90 (LED bulbs only)
 - TRACOM (Trailer Component Mfg., Inc.)

THE FOLLOWING IS ADDED TO THE FIRST PARAGRAPH:

Traffic Control devices shall be NCHRP-350 crash test compliant by the NJDOT implementation dates stated in the table below and shall be duly certified, if necessary.

| Traffic Control Device Category | Commonly used NJDOT Traffic Control Devices | AASHTO/FHWA implementation date for newly purchased Devices | NJDOT implementation date for newly purchased Devices | NJDOT deadline By which devices must be NCHRP-350 compliant |
|---------------------------------|--|---|---|---|
| 1 | Traffic cones, drums and delineator guide posts | 10/1/1998 | 1/1/2003 | 8/15/2003 |
| 2 | Vertical panel, portable sign supports, and type III barricades | 10/1/2000 | 1/1/2003 | 8/15/2003 |
| 3 | Truck mounted attenuators and traffic barriers-impact attenuators (crash cushions), barrier terminals, and longitudinal barriers | 10/01/1998 attenuators 10/01/2002 temporary barriers | 10/01/1998 | 3/15/2005 |

| | | | | |
|---|---|-----------------|-----------|-----------|
| 4 | Portable, usually trailer-mounted, devices such as lighting supports, flashing arrows panels, temporary traffic signals, and changeable message signs used in or adjacent to the traveled way | to be announced | 6/15/2005 | 6/15/2007 |
|---|---|-----------------|-----------|-----------|

Note: Resident Engineer's approval shall be obtained to use traffic control devices that are certified NCHRP 350 compliant, but not listed in the table.

Newly purchased devices shall be NCHRP-350 compliant. A list of NCHRP 350 compliant and FHWA approved devices can be found at:

http://www.fhwa.dot.gov/safety/fourthlevel/pro_res_road_nchrp350.htm

NCHRP-350 non-compliant, yet adequately serviceable category 3 traffic control devices, such as truck-mounted attenuators (TMA) purchased prior to 10/01/1998, will be allowed to be used until 03/15/2005 upon submitting new purchase documentation to the Resident Engineer.

617.15 Removable Pavement Marking Tape.

THE SUBSECTION HEADING AND ENTIRE TEXT ARE CHANGED TO:

617.15 Removable Wet Weather Pavement Marking Tape.

Removable wet weather pavement marking tape shall be installed at designated locations and according to the Manufacturer's recommendations. The tape shall be white or yellow and shall be installed in single or double lines, as designated.

The surface upon which the tape is to be installed shall be prepared according to Subsection 618.05. Removable wet weather marking tape shall be installed on dry surfaces, when the surface temperature is between 10 °C and 65 °C and when the ambient temperature is 10 °C and rising, and when the weather is otherwise favorable as determined by the Engineer. The tape shall not be overlapped, and only butt splices shall be used.

To ensure maximum adhesion, the tape shall be tamped and a truck shall be driven slowly over the tape several times. The tape shall be removed when no longer required for traffic control.

Removable tape that has become damaged and is no longer serviceable shall be replaced immediately and will not be measured for payment. Tape that is damaged by construction operations shall also be replaced without additional compensation.

617.16 Method of Measurement.

THE SIXTEENTH PARAGRAPH IS CHANGED TO:

Removable wet weather pavement marking tape will be measured by the linear meter of 100-MM wide strips, deducting the gaps.

617.17 Basis of Payment.

DELETE THE FOLLOWING PAY ITEM:

| | |
|---------------------------------|-----------------|
| <i>Pay Item</i> | <i>Pay Unit</i> |
| REMOVABLE PAVEMENT MARKING TAPE | LINEAR METER |

ADD THE FOLLOWING PAY ITEM:

| | |
|---|-----------------|
| <i>Pay Item</i> | <i>Pay Unit</i> |
| REMOVABLE WET WEATHER PAVEMENT MARKING TAPE | LINEAR METER |

SECTION 618 - TRAFFIC STRIPES AND MARKINGS

618.01 Description.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Removal of pavement reflectors and castings consists of the removal and disposal of existing raised pavement markers, including the lense when still intact.

Removal and replacement of pavement reflector lenses consists of the removal of existing pavement reflector lenses and installing new mono-directional or bi-directional pavement reflector lenses.

618.10 Defective Stripes or Markings.

STEP 2 OF SECOND SUBPART 2 IN THE THIRD PARAGRAPH IS CHANGED TO:

Step 2: All retroreflectance measurements taken with a LTL2000 Retrometer will be made on a clean, dry surface.

618.12 Removal of Traffic Stripes or Traffic Markings.

SUBSECTION IS RENAMED AND CHANGED TO:

618.12 Removal and Replacement of Traffic Delineation Devices.

A. **Removal of Traffic Stripes, Markings, or Reflectors and Castings.** The Contractor shall remove all types of traffic stripes or traffic markings by methods that do not damage the integrity of the underlying pavement or adjacent pavement areas, and that do not cause gouging, or create ridges or grooves in the pavement that may result in compromising vehicular control. Obliterating stripes or markings by painting over them shall not be permitted.

Before starting removal operations, the Contractor shall demonstrate the proposed method to accomplish the complete removal of the reflectors and castings and the removal of approximately 95 percent of the stripe or marking without the removal of more than 2 millimeters of pavement thickness. Area of removal includes the area of the stripe or marking plus 25 millimeters on all sides. Removal operations shall not be permitted until the method of removal has been approved.

Debris from the removal of traffic stripes and markings shall be disposed of according to Subsection 201.10.

618.14 Method of Measurement.

THE FOLLOWING IS ADDED TO THIS SUBSECTION:

Removal of pavement reflectors and castings will be measured by the number of units.

618.15 Basis of Payment.

THE FOLLOWING PAY ITEMS ARE ADDED:

| <i>Pay Item</i> |
|---|
| REMOVAL OF PAVEMENT REFLECTORS AND CASTINGS |

| <i>Pay Unit</i> |
|-----------------|
| UNIT |

DIVISION 800 – LANDSCAPING

SECTION 808 - FERTILIZING AND SEEDING

808.05 Basis of Payment.

THE SECOND PARAGRAPH IS CHANGED TO:

Payment will not be made for areas of fertilizing and seeding disturbed by Construction Operations, beyond the prescribed grading limits in islands and medians, and between prescribed grading limits and the right-of-way line, except as follows:

a 3.0 meter work strip from the toe of slope and a 4.5 meter strip from the top of slope or adjacent to drainage ditches constructed under this Contract.

all areas within the right-of-way limits approved for storage of topsoil.

DIVISION 900 - MATERIALS

SECTION 902 - BEAM GUIDE RAIL

902.01 Rail Element

THE ENTIRE SUBSECTION IS CHANGED TO:

Rail element including rounded end sections and buffer end sections, shall be high strength, low-alloy weathering steel conforming to the requirements of ASTM A 709, Grade 50W and AASHTO M 180, Type IV, Class A.

902.02 Post, Timber and Routed Timber Spacers, and Recycled / Synthetic Spacers

THE ENTIRE SUBSECTION IS CHANGED TO:

Posts and spacers shall be fabricated of high strength, low-alloy structural weathering steel conforming to the requirements of current ASTM A 709, Grade 50W.

Recycled/synthetic routed spacers shall be NCHRP 350 tested and FHWA approved. The Contractor shall furnish Working Drawings in accordance with Subsection 105.04 and shall provide documentation of FHWA acceptance of the type of spacers provided. The recycled/synthetic routed spacers shall be manufactured by either Lifetime Lumber or Mondo Polymer Technologies, Polylumber.

The bottom 125mm of the guide rail posts shall be galvanized in accordance with AASHTO M 111 or painted with two coats of coal tar epoxy in accordance with Section 912.22.

902.03 Rub Rail

THE ENTIRE SUBSECTION IS CHANGED TO:

Rub rail shall be steel channels or bent plate fabricated of high strength, low-alloy weathering structural steel conforming to the requirements of current ASTM A 709, Grade 50W

SECTION 903 – HOT MIX ASPHALT

903.01 Composition of Mixtures.

For this Project, the 25 percent or less RAP requirements shall govern.

SECTION 904 – BITUMINOUS MATERIALS

904.01 Asphalt Binder.

THE FIRST SENTENCE OF THE FIRST PARAGRAPH IS CHANGED TO:

Asphalt binder shall conform to AASHTO M320, "Performance-Graded Asphalt Binder".

904.06 Temperature-Volume Correction Factors.

SUBSECTION IS CHANGED TO:

Temperature-volume correction factors that shall be used to convert the volume of bituminous materials, measured at the temperature at the point of use, to the volume at 15 °C are found in the following tables:

**Table 904-1 Temperature-Volume Correction Factors
for Bituminous Materials**

Asphalt Binder, All Grades.
Cut-Back Asphalt, Grades RC-800, RC-3000, MC-800, and MC-3000.
Inverted Emulsified Asphalt, Grade IEMC-800.

SECTION 909 – LANDSCAPING MATERIALS

909.10 Topsoil.

A. Unacceptable Topsoil Sources.

ITEM 1. IS CHANGED TO:

1. Soils having less than 4.1 pH value, or greater than 8.0 pH value.

SECTION 912 - PAINTS, COATINGS, AND MARKINGS

912.10 Pavements Stripes or Markings.

C. Thermoplastic.

THE SECOND AND THIRD SUBPARTS ARE CHANGED TO:

2. For white, the composition of the mixture shall be as follows:

| Component | Percent by weight |
|---|--------------------|
| Resin/Binder | 22-26 percent |
| Glass Beads (pre-mix) | 30 percent minimum |
| White Pigment | 10 percent minimum |
| Calcium Carbonate and Inert Fillers (shall not contain silica other than as glass beads) | 34-38 percent |

3. Only yellow non-lead formulas shall be used, the composition of the mixture shall be as follows:

| Component | Percent by weight |
|---|--------------------|
| Resin/Binder | 22-26 percent |
| Glass Beads (pre-mix) | 30 percent minimum |
| Yellow Pigment | 2 percent minimum |
| Calcium Carbonate and Inert Fillers (shall not contain silica other than as glass beads) | 42-46 percent |

The yellow material's combined totals of lead, cadmium, mercury, and hexavalent chromium shall not exceed 100 parts per million.

The thermoplastic manufacturer shall certify, according to Subsection 106.04, that the material will meet the requirements specified.

912.12 Removable Pavement Marking Tape and Removable Black Line Masking Tape.

THE SUBSECTION HEADING AND SUBPART A IS CHANGED TO:

912.12 Removable Wet Weather Pavement Marking Tape and Removable Black Line Masking Tape.

A. Removable Wet Weather Pavement Marking Tape. The removable wet weather pavement marking tape shall consist of polymeric, conformable backing materials with a retroreflective surface designed to provide retroreflectivity in wet conditions. The underside of the tape shall be precoated with a pressure sensitive adhesive which bonds the tape to the roadway surface so as to be able to withstand traffic immediately after installation. Primers shall be used to promote tape adhesion to the pavement only in accordance with the tape manufacturers recommendations.

Daylight color of the white tape shall be no darker than color No. 37778 of FED-STD-595B. Daylight color of the yellow tape shall conform to the FHWA color tolerance chart for highway yellow.

When measured with an Advanced Retro Technology (ART) model MX-30 handheld retroreflectometer, the tape shall have initial, minimum retroreflectance values conforming to:

Dry Condition – ASTM D 1710

Entrance Angle = 88.76°

| Observation Angle (Degrees) | Specific Luminance | |
|--|---------------------------|---------------|
| | White | Yellow |
| 1.05 | 950 | 500 |

Note: The angular aperture of both the photoreceptor and the light projector shall be six minutes of arc. The reference axis shall be taken perpendicular to the test sample.

Continuous Wet Condition – ASTM E 2176

Entrance Angle = 88.76°

| Observation Angle (Degrees) | Specific Luminance | |
|--|---------------------------|---------------|
| | White | Yellow |
| 1.05 | 750 | 300 |

Note: Specific luminance is measured in millicandelas per square foot per foot-candles.

The removable tape shall be capable of being removed manually, intact or in large pieces, at temperatures above 4 °C without the use of solvents, burning, grinding, or blasting. Only tape that has previously received the approval of the Department Bureau of Materials shall be used. Certification of Compliance shall be furnished according to Subsection 106.04.

912.13 Inorganic Zinc Coating System.

A complete coating system of an inorganic zinc-rich primer, a high-build epoxy intermediate coat, and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

| Code # | Manufacturer | Primer | Intermediate | Finish |
|---------------|--------------------------------------|--|--------------------------------------|--|
| IEU-3 | Kop-Coat | No. 701 | No. 200 HB Epoxy | No. 1122 BRS |
| IEU-7 | Devoe | Catha-Coat (302 A) | Bar-Rust 235 | Devthane 359 |
| IEU-11 | Valspar Corporation | MZ-7 Inorganic Zinc Rich, 13-F-12 Green | Val-Chem Hi-Build Epoxy 89 Series | Urethane Enamel V40 Series |
| IEU-13 | Con-Lux | Zinc-Plate 21, Type 2 | Epolon Multi-Mill | Acrolon II |
| IEU-14 | Carboline | Carbo Zinc 11 HS | Carboline 893 | Carbothane 134 HS |
| IEU-17 | Ameron | Dimetcote 21-9 | Amercoat 383 HS | Amercoat 450 HS |
| IEU-18 | Elite Coatings Co. | P-159 Inorganic Zinc Primer | E-375 Polyrox High Build Epoxy | Shinethane Urethane LS-5436/LS-5437 |
| IEU-19 | International Protective Coatings | Interzinc 22 HS | Intergard 475 HS | Interthane 990 HS |

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 4 liter sample for each coat of paint in the system.

2. Infrared curves (2.5 to 15 micrometers) for each coat. Curves for the dry film of the vehicle (binder) of each component and for the mixed paint shall be included.
3. Weight per liter, at 25 °C, for each coat. Variance shall be within plus or minus 50 grams of the normal weight per liter of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 25 °C, for each coat. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of each coat.
6. Percent of metallic zinc by weight in the dry film of the cured zinc primer coat. This percentage shall be greater than or equal to that of the sample that was approved and placed on the QPL.
7. Percent of metallic zinc by weight in the zinc pigment component.
8. Finish coat color chips for selection of color by the Engineer.
9. The required curing time and dry film thickness for the qualification of the zinc primer for slip-critical connections in conformance with the requirements of AASHTO, Division I, Table 10.32.3C for Class of Surface B. A certified test report with the slip coefficient tested according to AASHTO Division 1, Article 10.32.3.2.3.
10. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
11. Mixing and thinning directions.
12. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each container of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in liters or the weight of zinc powder in kilograms. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

912.14 Epoxy Mastic Coating System.

A complete coating system of an aluminum epoxy mastic primer and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

| <u>Code #</u> | <u>Manufacturer</u> | <u>Primer</u> | <u>Finish</u> |
|---------------|---------------------|-------------------------------------|------------------------------------|
| EU-4 | Devoe | Bar-Rust 235 | Devthane 359 |
| EU-6 | Kop-Coat | Aluminum Epoxy Mastic | No. 1122 BRS |
| EU-7 | Con-Lux | Epolon 81 Aluminum | Acrolon II-2200 Series |
| EU-9 | Carboline | Carbomastic 90 Aluminum | Carbothane 134 HS |
| EU-10 | MAB | Ply-Mastic 101 | Ply-Thane 890 HS |
| EU-11 | Birk | Birk Aluminum Mastic Coating No. 50 | Birk Aliphatic Polyurethane No. 30 |
| EU-12 | Ameron | Amerlock 400 AL | Amercoat 450 HS |
| EU-13 | Sherwin Williams | Epoxy Mastic Aluminum | Hi-Solids Polyurethane B65 Series |
| EU-14 | Mercury Paint | Merma 100 Epoxy Mastic | Merthane 300 Urethane |
| EU-15 | Valspar | 75-A-1 Alumapoxy | Urethane Enamel V40 Series |

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 4 liter sample for each coat of paint in the system.

2. Infrared curves (2.5 to 15 micrometers) for each coat. Curves for the dry film of the vehicle (binder) of each component and for the mixed paint shall be included.
3. Weight per liter, at 25 °C, for each coat. Variance shall be within plus or minus 50 grams of the nominal weight per liter of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 25 °C, for each coat. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of each coat.
6. Finish coat color chips for selection of color by the Engineer.
7. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
8. Mixing and thinning directions.
9. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each container of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in liters or the weight of zinc powder in kilograms. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

912.15 Organic Zinc Coating System.

A complete coating system of an organic zinc-rich primer, a high build epoxy intermediate coat, and a urethane finish coat shall be selected from one of the approved coating systems listed below. All products for the complete system, including thinners and solvents, shall be from the same manufacturer and shall be as follows, or from the current Bureau of Materials Qualified Paints List (QPL):

| <u>Code #</u> | <u>Manufacturer</u> | <u>Primer</u> | <u>Intermediate</u> | <u>Finish</u> |
|---------------|----------------------|-------------------------------------|---|-------------------------------------|
| OEU-3 | Devoe | Catha-Coat 315 | Bar-Rust 235 | Devthane 359 |
| OEU-7 | Porter International | Interzinc 52 | Interplus 770 | Interthane PSY 999 |
| OEU-15 | Valspar | MZ-4 Epoxy Zinc Rich, 13-F-4 Green | Val-Chem Hi-Build Epoxy 89 Series | Urethane Enamel V40 Series |
| OEU-16 | Con-Lux | Zinc-Plate 49, Type 2 | Epolon Multi-Mill | Acrolon II |
| OEU-17 | Con-Lux | Zinc-Plate 72e Epoxy Prime | Epolon Multi-Mill | Acrolon II |
| OEU-18 | Carboline | Carboline 858 | Carboline 893 | Carbothane 134 HS |
| OEU-19 | MAB | Ply-Tile Zinc Rich Primer 520-A-331 | Ply-Tile 520-W-360 or Ply-Tile 520-W-45 | Ply-Thane 890 HS |
| OEU-20 | Birk | Birk Zinc Rich Epoxy Primer No. 60 | Birk High Build Epoxy Coating No. 70 | Birk Aliphatic Polyurethane No. 30 |
| OEU-21 | Ameron | Amercoat 68 HS | Amercoat 383 HS | Amercoat 450 HS |
| OEU-22 | Sherwin Williams | Zinc Clad IV | Heavy Duty Epoxy B67 Series | Hi-Solids Polyurethane B65 Series |
| OEU-23 | Elite Coatings Co. | P-281 Epoxy Zinc Rich | E-375 Polycrox High Build Epoxy Primer | Shinethane Urethane LS-5436/LS-5437 |

Drying time between coats shall be per the manufacturer's recommendations.

The following information shall be submitted for the system selected at least one month before painting is anticipated:

1. A 4 liter sample for each coat of paint in the system.

2. Infrared curves (2.5 to 15 micrometers) for the zinc primer, intermediate, and finish coats to include curves for the dry film of the vehicle (binder) of each component and for the mixed paint.
3. Weight per liter, at 25 °C, for the zinc primer, intermediate, and finish coats. Variance shall be within plus or minus 50 grams of the nominal weight per liter of the sample that was approved and placed on the QPL.
4. Viscosity in Krebs Units, at 25 °C, for the zinc primer vehicle and the intermediate and finish coat paints. Variance shall be within plus or minus 5 Krebs Units, or equivalent units of another viscometer, of the viscosity of the sample that was approved and placed on the QPL.
5. Percent of solids by weight of the zinc primer vehicle and the intermediate and finish coat paints.
6. Percent of metallic zinc by weight in the dry film of the cured zinc primer coat. This percentage shall be greater than or equal to that of the sample that was approved and placed on the QPL.
7. Percent of metallic zinc by weight in the zinc pigment component.
8. Finish coat color chips for selection of color by the Engineer.
9. The required curing time and dry film thickness for the qualification of the zinc primer for slip-critical connections in conformance with the requirements of AASHTO, Division I, Table 10.32.3C for Class of Surface A. A certified test report with the slip coefficient tested according to AASHTO Division 1 Article 10.32.3.2.2.
10. Technical data sheets, MSDS, and specific application instructions for all coats. In the event of a conflict between the data/instruction sheets and these Specifications, with the approval of the Engineer, the manufacturer's requirements shall govern. Work shall not be allowed to proceed until the information is received and approved.
11. Mixing and thinning directions.
12. Recommended spray nozzles and pressures.

The Contractor shall submit the manufacturer's recommended repair procedures to correct damage such as that caused in handling and shipping, deficient or excessive coating thickness, removal of zinc salts and other contaminants that would be detrimental to succeeding coats, and procedures for surface preparation and painting of rust spots.

The Contractor shall provide the services of a paint or a painting technical representative from the paint manufacturer at the beginning of operations and whenever required during operations.

Each container of paint shall be labeled to show the name of the manufacturer, the trade name designation of the contents, the lot or batch number, the date of manufacture, and the volumetric contents in liters or the weight of zinc powder in kilograms. Each container shall be labeled according to the Code of Federal Regulations for flammables and shall contain all information necessary to comply with NJSA 34:5A-1 New Jersey Worker and Community Right To Know Act.

SECTION 914 – PORTLAND CEMENT CONCRETE, MORTAR, AND GROUT

914.02 Portland Cement Concrete Design, Control, and Acceptance Testing Requirements.

B. Proportioning and Verification.

THE SECOND SENTENCE OF THE THIRD PARAGRAPH IS CHANGED TO:

At least six 100 by 200 millimeter test cylinders shall be prepared from each batch and cured according to AASHTO T 23 or AASHTO T 126.

THE FIRST SENTENCE OF THE TENTH PARAGRAPH IS CHANGED TO:

Classes A and B concrete may be designed to achieve early strength requirements by increasing the Cement content.

C. Acceptance Testing Procedures for Slump and Air Entrainment.

THE FIRST SENTENCE OF THE FOURTH PARAGRAPH IS CHANGED TO:

Following any permitted additions, the drum shall be rotated at the recommended mixing speed for a minimum of 30 revolutions without exceeding 300 total revolutions, the original test results shall be disregarded, and a single test for both slump and air entrainment performed.

D. General Acceptance Testing Requirements for Strength.

THE FOLLOWING IS ADDED AFTER THE SECOND PARAGRAPH:

Concrete test specimens which are to be used for determination of early strengths for form removal, opening to traffic, or otherwise placing the concrete into service shall be cured according to the field curing provisions in AASHTO T-23.

E. Acceptance Testing for Strength for Pay-Adjustment Items.

THE ENTIRE TEXT OF THIS SUBPART AFTER THE FIRST PARAGRAPH IS CHANGED TO:

The amount of pay-adjustment in dollars is the product of the Pay Item base price times the lot quantity times the percent pay-adjustment (expressed as a decimal) given by Equation 1 or Equation 2.

Equation 1 and Equation 2:

| Quality | Pay-adjustment (Percent) | |
|---------|--------------------------|------------|
| PD < 50 | PPA = 3.0 - 0.3 PD | Equation 1 |
| PD ≥ 50 | PPA = 26.0 - 0.76 PD | Equation 2 |

Where: PPA = Percent Pay-adjustment
PD = Percent Defective (Estimate of percent of lot below the class design strength by the use of Equation 3 and Subsection 914.05, Table 914-5)

Equation 3:

$$Q = (ALS - CDS) / S$$

Where: Q = Quality index for pay-adjustment computations
ALS = Average lot strength in psi
CDS = Class design strength in psi
S = Standard deviation of the strength test results in psi for the lot as computed by Equation 4

Equation 4:

$$S = \sqrt{\frac{\sum (X_i - ALS)^2}{N - 1}}$$

Where: \sum = Summation
X_i = Individual test result (average strength of a test cylinder pair)
N = Number of test results for the lot

Note: When only a single test result is available, the standard deviation "S" is assumed to equal 2 Mpa.

For lots having percent defective (PD) levels less than 10 percent, Equation 1 provides positive adjustments to the contract price. For lots having exactly 10 percent defective, there is no adjustment to the contract price. For lots having greater than 10 percent defective, Equations 1 or 2, as appropriate, subtract progressively larger amounts from the contract price.

If, based on the initial series of tests, the lot quality of a pay-adjustment item is estimated to be PD = 50 or greater, or if any individual test value (average of a cylinder pair) falls below the retest limit for non-pay-adjustment concrete in Subsection 914.05, Table 914-4, the Engineer has the option to reevaluate by coring or other suitable means. When this provision is applied to Class P concrete, each beam or pile in the steam bed will be evaluated separately.

If the Department elects not to core, the Contractor may accept the pay-adjustment of (PPA) calculated by Equation 2 or, when approved by the Engineer, may take cores according to Subsection 914.05, Table 914-4 at no cost to the Department. The Contractor must take the cores within 60 days from notification of the option to core. As an aid in making this decision, the Contractor will be permitted to perform nondestructive testing using a method or device approved by the Engineer.

When re-evaluation is accomplished by a method other than coring, the results will be used only to determine what further action is to be taken. If any of the non-core tests results are below the class design strength, the Engineer has the option to core. If this option is waived, the Contractor may elect to core, at no cost to the State and within 60 days after being presented with this option, or to accept the pay-adjustment computed from the initial test cylinder results. If the Contractor elects to core, the coring shall be performed as directed and the Department will test the cores. If none of the non-core test results is below the class design strength, the Engineer may elect either to core or to accept the lot at 100 percent payment.

If, based on the core results, the lot is determined to be at a quality level of $PD < 75$, the pay-adjustment shall be computed by Equation 1 or Equation 2, as appropriate. If the lot is confirmed to be at a quality level of $PD = 75$ or greater, the lot is considered to be rejectable and the Engineer may:

1. Require the Contractor to remove and replace the defective lot at no cost to the State,
2. Allow the Contractor to leave the defective lot in place and receive a percent pay-adjustment (PPA) computed by Equation 2, or
3. Allow the Contractor to submit a plan, for approval, for corrective action to be performed at no cost to the State. If the plan for corrective action is not approved, either option 1 or 2 above may be applied.

F. Acceptance Testing for Strength for Non-Pay-Adjustment Items.

THE ENTIRE TEXT OF THIS SUBPART IS CHANGED TO:

All concrete items not specifically designated as pay-adjustment items as described in Subsection 914.02, Subpart E are considered to be non-pay-adjustment items, but may be accepted by pay-adjustment under certain circumstances. Such an item is eligible for 100 percent payment ($PA = 0$) provided the retest limit of Subsection 914.05, Table 914-4 is met. If this requirement is not met, the item will be treated as a pay-adjustment item according to Subsection 914.02, Subpart E, and all pay-adjustment provisions shall apply except that the item bid price will be used instead of an item base price in the computation of the pay-adjustment.

When a pay-adjustment is computed for any of the following items, which are only partially composed of concrete, the amount of pay-adjustment, if any, will be multiplied by the Estimated Percentage of Concrete (expressed as a decimal) as indicated below:

| Pay Item | Estimated Percentage of Concrete |
|--|---|
| INLETS, TYPE ____ | 30 |
| INLETS, TYPE ____, USING EXISTING CASTING | 30 |
| INLETS, TYPE B- ____ | 40 |
| INLETS, TYPE B- ____, USING EXISTING CASTING | 40 |
| INLETS, TYPE ____ MODIFIED | 40 |
| INLETS, TYPE ____ MODIFIED, USING EXISTING CASTING | 40 |
| INLETS, TYPE ES | 50 |
| INLET CASTINGS, TYPE ES | 40 |
| MANHOLES | 30 |
| MANHOLES, ____ MM DIAMETER | 30 |
| MANHOLES, USING EXISTING CASTING | 30 |
| MANHOLES, SANITARY SEWER | 30 |
| MANHOLES, SANITARY SEWER, USING EXISTING CASTING | 30 |
| GRANITE CURB | 25 |
| RESET GRANITE CURB | 25 |
| BEAM GUIDE RAIL ANCHORAGES | 25 |
| CHAIN-LINK FENCE, ____ M HIGH | 25 |
| CHAIN-LINK FENCE, ALUMINUM-COATED STEEL, ____ M HIGH | 25 |
| CHAIN-LINK FENCE, PVC-COATED STEEL, ____ M HIGH | 25 |
| CHAIN-LINK FARM-TYPE FENCE | 25 |

| | |
|--|----|
| GATES, CHAIN-LINK FENCE, ___ M WIDE | 25 |
| GATES, CHAIN-LINK FENCE, ALUMINUM-COATED STEEL, ___ M WIDE | 25 |
| GATES, CHAIN-LINK FENCE, PVC-COATED STEEL, ___ M WIDE | 25 |
| GATES, CHAIN-LINK FARM-TYPE FENCE, ___ M WIDE | 25 |
| RESET FENCE | 25 |
| TEMPORARY CHAIN-LINK FENCE, ___ M HIGH | 25 |
| GUIDE SIGNS, TYPE GA, BREAKAWAY SUPPORTS | 20 |
| GUIDE SIGNS, TYPE GA, NON-BREAKAWAY SUPPORTS | 20 |

The amount of pay-adjustment for pay items not listed above is the product of the unit bid price times the lot quantity times the percent pay-adjustment given by Equation 1.

914.04 Sampling and Testing Methods.

THE FOLLOWING AASHTO TEST METHOD IS ADDED:

| | |
|------|---|
| T303 | Standard Test Method for Accelerated Detection of Potentially Deleterious Expansion of Mortar Bars Due to Alkali-Silica Reaction. |
|------|---|

914.05 Tables.

TABLES 914-1, 914-3, AND 914-4 ARE CHANGED TO:

Table 914-1 Requirements for Roadway Concrete Items

| | Concrete Class | Slump (mm) | Percent Air Entrainment for Coarse Aggregate Size Numbers | | | | |
|---|----------------|------------|---|---------|---------|---------|---------|
| | | | 357 | 467 | 57 | 67 | 8 |
| Cast-in-Place Items | | | | | | | |
| Surface Course, Bridge Approach Slabs, Bridge Approach Transition Slabs | B | 50±25 | 5.0±1.5 | 5.0±1.5 | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Base Course | B | 50±25 | 5.0±1.5 | 5.0±1.5 | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Inlet and Manhole Walls, Headwalls, Miscellaneous Concrete | B | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Inlet and Manhole Top Slabs, Sidewalks, Driveways, Islands | B | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Slope Gutters, Vertical Curb, Sloping Curb, Barrier Curb and Base | B | 100±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Concrete and White Concrete Vertical, Sloping and Barrier Curb, Concrete and White Concrete Islands | B | 100±25 | ---- | ---- | 7.0±2.0 | 7.0±2.0 | 8.0±2.0 |
| Foundations for: | | | | | | | |
| Inlets and Manholes | B | 75±25 | 6.5 max | 6.5 max | 7.5 max | 7.5 max | 8.5 max |
| Electrical Items | B | 75±25 | ---- | ---- | 7.5 max | 7.5 max | 8.5 max |
| Signs | B | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 | 7.0±1.5 |
| Junction Boxes | B | 75±25 | ---- | ---- | 7.5 max | 7.5 max | 8.5 max |

Table 914-1 (Continued)

| | Concrete Class | Slump (mm) | Percent Air Entrainment for Coarse Aggregate Size Numbers | | | |
|---|----------------|------------|---|------|---------|---------|
| | | | 357 | 467 | 57 | 67 |
| Cast-in-Place Items (continued) | | | | | | |
| Footings for Fence Posts, Guide Rail End Treatment | B | 75±25 | ---- | ---- | 7.5 max | 7.5 max |
| Culverts | A | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 |
| Monuments | A | 75±25 | ---- | ---- | 7.5 max | 7.5 max |
| Slope Protection | B | 50±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 |
| Precast Items | | | | | | |
| Culverts | A | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 |
| Inlets and Manholes, Junction Boxes, Headwalls, Reinforced Concrete End Sections (See note 2) | B | 75±25 | ---- | ---- | 6.0±1.5 | 6.0±1.5 |
| Concrete and White Concrete Barrier Curb | B | 75±25 | ---- | ---- | 7.0±2.0 | 7.0±2.0 |

Note 1: According to Subsection 501.03, a Type F water-reducing, high range admixture will be permitted according to Subsection 905.02 and Subsection 914.02, Subparts B and C. When a Type F admixture is used, the table Slump and Air Content values for the given concrete item shall be changed as follows:

Slump: 150 ± 50 millimeters

Air Content: Increase both the target value and tolerance percentages by 0.5.

Note 2: For the items in this category, the slump may be reduced to zero (dry cast) provided that adequate consolidation, acceptable to the Engineer, is achieved.

Table 914-3 Mix Design Requirements

| | Class of Concrete | | | | | |
|--|-------------------|-------|-------|--------|--------|--------|
| | A | B | S | P | P-1 | P-2 |
| Class Design Strength (28 days, Mpa Note 3) | 32 | 26 | 14 | 38 | 42 | 45 |
| Verification Strength (28 days, Mpa Note 3) | 37 | 31 | -- | 42 | 45 | 48 |
| Maximum Water/Cement Ratio (Note 2) | | | | | | |
| kg/kg | 0.443 | 0.488 | 0.577 | Note 1 | Note 1 | Note 1 |
| L/bag | 19 | 21 | 25 | Note 1 | Note 1 | Note 1 |
| Minimum Cement Content | | | | | | |
| kg/m ³ | 363 | 335 | 391 | Note 1 | Note 1 | Note 1 |
| bags/m ³ | 8.5 | 7.8 | 9.2 | Note 1 | Note 1 | Note 1 |

Note 1: According to PCI Manual, except as indicated in Note 2.

Note 2: The maximum water/cement ratio for all classes of concrete except for Classes P, P-1 and P-2, when a Type F water-reducing, high range admixture is used according to Tables 914-1 and 914-2, shall be reduced by 0.40 kg/kg (17.0 L/bag).

Note 3: All concrete test results shall be recorded to the nearest 0.10 Mpa.

Note 4: To successfully meet the requirements of this specification, the target production strength must be higher than the Class Design Strength by an amount proportional to the Producer's within-lot standard deviation.

Table 914-4 Lot Sizes, Sampling Rates and Retest Limits

| | Class of Concrete | | | | | |
|-----------------------------------|----------------------|-------|-------|--|-------|-------|
| | A | B | S | P | P-1 | P-2 |
| Lot Size (maximum) | One Day's Production | | | One Day's Production of a Single Steam Bed | | |
| Pay-Adjustment Items | | | | | | |
| Initial Sampling Rate | 5/Lot | 5/Lot | -- | 5/Lot | 5/Lot | 5/Lot |
| Retest Sampling Rate (minimum) | 5/Lot | 5/Lot | -- | 5/Unit or Load Test | | |
| Non-Pay-Adjustment Items | | | | | | |
| Initial Sampling Rate | 3/Lot | 2/Lot | 1/Lot | 3/Lot | 3/Lot | 3/Lot |
| Retest Limit (Mpa) | 30 | 25 | 14 | 37 | 41 | 44 |
| Retest Sampling Rate | 5/Lot | 5/Lot | 5/Lot | 5/Lot | 5/Lot | 5/Lot |

- Note 1: The lot sizes are maximums and, at the option of the Engineer, any lot may be subdivided into two or more smaller lots. When such a subdivision is made, the specified sampling rate applies to each of the smaller lots.
- Note 2: An initial strength test result is defined as the average strength of two 100 by 200 millimeter compression test cylinders, cured for 28 days, and tested in the Department Laboratory except for Classes P, P-1, and P-2 cylinders which may be tested at the fabricator's plant under the supervision of the Engineer.
- Note 3: A retest result is defined as the strength of an individual test result obtained by coring or other suitable means. If retest is performed by coring, each retest result is defined as the corresponding nominal core strength divided by 0.85.
- Note 4: The specified sampling rates shall apply except that no more than one test per truckload or batch of concrete will be required (except for air and slump tests when retempering). It is expected that each structural component will have a representative sample taken. At the option of the Engineer, nonstructural concrete lots consisting of 15 cubic meters or less may be accepted without strength tests.
- Note 5: No lot shall include more than one class of concrete nor include concrete of the same class having different specified levels of slump or air entrainment.
- Note 6: For prestressed concrete, if more than one bed is used or if more than 60 cubic meters of concrete are used, the production shall be subdivided as equally as possible into two or more lots.
- Note 7: Retest limit for non-pay-adjustment roadway and structural items requiring the use of Class B, white concrete, shall be 21 Mpa.

SECTION 916 - SIGN MATERIALS

916.10 Breakaway Steel "U" Post Sign Supports. THE FIRST PARAGRAPH IS CHANGED TO:

Steel "U" post shall be either Ribbak Modified-Flanged channel section as manufactured by Marion Steel Co., Marion, OH or the "U" channel section as manufactured by Highway Steel, Inc., Chicago Heights, IL. The breakaway system shall be the Lap Splice System as manufactured by Marion Steel, Inc. for the Ribbak Modified-Flanged channel section and Safety Splice System as manufactured by Highway Steel, Inc. for the "U" Channel Section, except that the steel "U" posts shall be galvanized after fabrication, including punching and drilling holes, in conformance with ASTM A 123.

SECTION 919 - MISCELLANEOUS

919.07 Fly Ash. THE FIRST PARAGRAPH IS CHANGED TO:

Fly ash for portland cement concrete shall conform to ASTM C 618, Class C or Class F except that the loss on ignition shall not be more than three percent. Fly ash used to control alkali-silica reactivity shall be Class F and shall comply with Supplementary Optional Chemical Requirements of ASTM C 618, Table 2. Before each source of fly ash is approved, certified results of tests conducted by a testing agency shall be submitted to and verified by the Department. Accompanying the certification shall be a statement from the supplier listing the source and type of coal, the methods used to burn, collect, and store the fly ash, and the quality control measures employed.

THE FOLLOWING NEW SUBSECTION IS ADDED:

919.22 Controlled Low Strength Material (CLSM).

CLSM shall conform to the following:

| | |
|--|--------|
| Fine Aggregate | 901.12 |
| Chemical Admixtures | 905.02 |
| Portland Cement, Type I, II, III | 919.11 |
| Water | 919.15 |

CLSM shall consist of a mixture of portland cement, water, fine aggregate and chemical admixtures. Fly ash shall not be permitted in mixes intended for trench backfilling. The CLSM mixture shall be proportioned to provide a backfill material that is self-compacting and capable of being excavated with hand tools at a later date. CLSM shall be proportioned to produce a 28-day compressive strength of 345 to 1 035 kilopascals. An accelerating admixture shall be used to produce a fast setting flowable mixture as required. The CLSM shall have a permeability of $1.7 \times 10^{-3} \pm 0.2 \times 10^{-3}$ centimeters per second according to ASTM D5084 for backfilling of conduits and piping.

At least 45 days prior to the start of any CLSM placement, trial batches of CLSM shall be prepared of the same materials and proportions proposed for use on the project. Each mix design shall be submitted on portland cement concrete mix design forms furnished by the Department, naming the sources of materials and test data.

Department personnel will be present at the time of verification batching to confirm that the proportions and materials batched are according to the proposed mix designs. At least six 150 X 300 millimeters compression test cylinders shall be prepared for each batch according to ASTM 5971-96 for 28-day strengths except for fast setting mixes, which shall be tested at the specified cure time.

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

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ATTACHMENTS

- A. Employment Preference for Appalachian Contracts
(included in Appalachian contracts only)

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.

3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.

4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

Section I, paragraph 2;
Section IV, paragraphs 1, 2, 3, 4, and 7;
Section V, paragraphs 1 and 2a through 2g.

5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.

6. **Selection of Labor:** During the performance of this contract, the contractor shall not:

- a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
- b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 *et seq.*) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

d. In the event the union is unable to provide the contractor

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

with a reasonable flow of minority and women referrals within the

time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

(4) The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. NONSEGREGATED FACILITIES

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

IV. PAYMENT OF PREDETERMINED MINIMUM WAGE

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. General:

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the

appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. Classification:

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

(1) the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

(2) the additional classification is utilized in the area by the construction industry;

(3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. Payment of Fringe Benefits:

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:

a. Apprentices:

(1) Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

(2) The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

(3) Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

(4) In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

(1) Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

(2) The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(3) Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

(4) In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under an approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. Apprentices and Trainees (Programs of the U.S. DOT):

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. Withholding:

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. Overtime Requirements:

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. Violation:

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of \$10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. Withholding for Unpaid Wages and Liquidated Damages:

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. STATEMENTS AND PAYROLLS

(Applicable to all Federal-aid construction contracts exceeding \$2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are

exempt)

1. Compliance with Copeland Regulations (29 CFR 3):

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. Payrolls and Payroll Records:

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

(2) that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

(3) that each laborer or mechanic has been paid not less than the applicable wage rate and fringe benefits or cash equivalent for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. RECORD OF MATERIALS, SUPPLIES, AND LABOR

1. On all Federal-aid contracts on the National Highway System, except those which provide solely for the installation of protective devices at railroad grade crossings, those which are constructed on a force account or direct labor basis, highway beautification contracts, and contracts for which the total final construction cost for roadway and bridge is less than \$1,000,000 (23 CFR 635) the contractor shall:

a. Become familiar with the list of specific materials and supplies contained in Form FHWA-47, "Statement of Materials and Labor Used by Contractor of Highway Construction Involving Federal Funds," prior to the commencement of work under this contract.

b. Maintain a record of the total cost of all materials and supplies purchased for and incorporated in the work, and also of the quantities of those specific materials and supplies listed on Form FHWA-47, and in the units shown on Form FHWA-47.

c. Furnish, upon the completion of the contract, to the SHA resident engineer on Form FHWA-47 together with the data required in paragraph 1b relative to materials and supplies, a final labor summary of all contract work indicating the total hours worked and the total amount earned.

2. At the prime contractor's option, either a single report covering all contract work or separate reports for the contractor and for each subcontract shall be submitted.

VII. SUBLETTING OR ASSIGNING THE CONTRACT

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. SAFETY: ACCIDENT PREVENTION

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree

of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more than \$10,000 or imprisoned not more than 5 years or both."

X. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

(Applicable to all Federal-aid construction contracts and to all related subcontracts of \$100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 *et seq.*, as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 *et seq.*, as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.

2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.

3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is

under consideration to be listed on the EPA List of Violating Facilities.

4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

1. Instructions for Certification - Primary Covered Transactions:

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the

certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. Instructions for Certification - Lower Tier Covered Transactions:

(Applicable to all subcontracts, purchase orders and other lower tier transactions of \$25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion—Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

XII. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT PREFERENCE FOR
APPALACHIAN CONTRACTS**

(Applicable to Appalachian contracts only.)

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph 1c shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph 4 below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification,

(c) the date on which he estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, he shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within 1 week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph 1c above.

5. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION
CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

1. As used in these Specifications:
 - a. Covered area means the geographical area in which the Project is located.
 - b. Director means Director, Office of Federal Contract Compliance Programs, United States Department of Labor or any person to whom the Director delegates authority.
 - c. Employer identification number means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, US Treasury Department Form 941.
 - d. Minority includes:
 - (1) Black (a person having origins in any of the black African racial groups not of Hispanic origin);
 - (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);
 - (3) Asian and Pacific Islander (a person having originals in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and
 - (4) American Indian or Alaskan Native (a person having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participating or community identification).
2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of \$10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.
3. The Contractor shall implement the specific affirmative action standards provided in paragraphs 6a through p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction Contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. The

Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

4. Neither the provisions of any collective bargaining agreement nor the failure by a union with whom the Contractor has a collective bargaining agreement to refer either minorities or women shall excuse the Contractor's obligations under these Specifications, Executive Order 111246, or the regulations promulgated pursuant thereto.
5. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the US Department of Labor.
6. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:
 - a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foreman, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment with specific attention to minority or female individual working at such sites or in such facilities.
 - b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.
 - c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred back to the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.
 - d. Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the contractor a minority person or women sent by the Contractor, or when the Contractor

has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

- e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the source compiles under 6b above.
- f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.
- g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on site supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.
- h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news median, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.
- i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.
- j. Encourage present minority and female employees to recruit other minority persons and females and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

- k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.
 - l. Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.
 - m. Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.
 - n. Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.
 - o. Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction Contractor and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.
 - p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.
7. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (6a through p). The efforts of a Contractor association, joint contractor union, Contractor-Community, or other similar group of which the Contractor is a member and participant may be asserted as fulfilling any one or more of its obligations under 6A through p of these Specifications provided that the Contractor actively participates in the group, make every effort to assure that the group has a positive impact on the employment of minorities and females in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female work force participation, make a good faith effort to meet its individual goals and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.
8. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women both minority and nonminority. Consequently, the Contractor may be in violation of the Executive Order if a particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the

Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

9. The Contractor shall not use the goals or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.
10. The Contractor shall not enter any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.
11. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspensions, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246 as amended.
12. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 6 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.
13. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone number, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (such as mechanic, apprentice, trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.
14. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (such as those under the Public Works Employment Act of 1977 and the community Development Block Grant Program).
15. Noncompliance by the Contractor with the requirements of the Affirmative Action Program for Equal Employment Opportunity may be cause for delaying or withholding monthly and final payments pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL
OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The goals for minority and female participation, in the covered area, expressed in percentage terms for the Contractor's aggregate work force in each trade, on all construction work are as shown on Page 2.

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4. (3) a, and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for sole purpose of meeting the Contractor's goals shall be a violation of the contract, the Executive Order and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

2. The Contractor will provide the Department with written notification in triplicate within 10 working days of award of any construction subcontract in excess of \$10,000 at any tier for construction work under the contract resulting from this solicitation. The notification will list the name, address and telephone number of the subcontractor; employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.
3. As used in this Notice and in the Contract resulting from this solicitation the covered area is the county or counties in which the Project is located.
4. If a project is located in more than one county, the minority work hours goal, only, will be determined by the county which serves as the primary source of hiring or, if workers are obtained almost equally from one or more counties, the single minority goal will be the average of the affected county goals.

WORK HOUR GOALS IN EACH TRADE FOR MINORITY AND FEMALE
PARTICIPATION

| <u>COUNTY</u> | <u>MINORITY PARTICIPATION</u> <u>PERCENT</u> | <u>FEMALE PARTICIPATION</u> <u>PERCENT</u> |
|---------------|---|---|
| Atlantic | 18.2 | 6.9 |
| Bergen | 15.0 | 6.9 |
| Burlington | 17.3 | 6.9 |
| Camden | 17.3 | 6.9 |
| Cape May | 14.5 | 6.9 |
| Cumberland | 16.0 | 6.9 |
| Essex | 17.3 | 6.9 |
| Gloucester | 17.3 | 6.9 |
| Hudson | 12.8 | 6.9 |
| Hunterdon | 17.0 | 6.9 |
| Mercer | 16.4 | 6.9 |
| Middlesex | 15.0 | 6.9 |
| Monmouth | 9.5 | 6.9 |
| Morris | 17.3 | 6.9 |
| Ocean | 17.0 | 6.9 |
| Passaic | 12.9 | 6.9 |
| Salem | 12.3 | 6.9 |
| Somerset | 17.3 | 6.9 |
| Sussex | 17.0 | 6.9 |
| Union | 17.3 | 6.9 |
| Warren | 1.6 | 6.9 |

STATE OF NEW JERSEY EQUAL EMPLOYMENT OPPORTUNITY
FOR CONTRACTS FUNDED BY FHWA

The parties to this Agreement do hereby agree that the provisions of NJSA 10:2-1 through 10:2-4 and NJSA 10:5-31 et seq (PL 1975, c 127, as amended and supplemented) dealing with discrimination in employment on public contracts, and the rules and regulations promulgated pursuant thereunto, are hereby made a part of this contract and are binding upon them.

During the performance of this contract, the Contractor agrees as follows:

- a. The Contractor or subcontractor, where applicable, will not discriminate against any employee or applicant for employment because of age, race, creed, color, national origin, ancestry, marital status or sex. The Contractor will take affirmative action to ensure that such applicants are recruited and employed, and that employees are treated during employment, without regard to their age, race, creed, color, national origin, ancestry, marital status or sex. Such action shall include but not be limited to the following: employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the Department Compliance Officer setting forth provisions of this nondiscrimination clause;
- b. The Contractor or subcontractor, where applicable will, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, state that all qualified applicants will receive consideration for employment without regard to age, race, creed, color, national origin, ancestry, marital status or sex;
- c. The Contractor of subcontractor, where applicable, will send to each labor union or representative of workers with which it has a collective bargaining agreement or other contract or understanding, a notice, to be provided by the Department of Compliance Officer, advising the labor union or workers' representative of the contractor's commitments under this act and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

The notices referred to in paragraphs a and c may be obtained from the Supervising Engineer of Construction or his representative at the preconstruction conference.

EMERGING SMALL BUSINESS ENTERPRISE UTILIZATION ATTACHMENTFHWA FUNDED CONTRACTSI. UTILIZATION OF EMERGING SMALL BUSINESS ENTERPRISE (ESBE) AS CONTRACTORS, MATERIALS SUPPLIERS AND EQUIPMENT LESSORS.

The New Jersey Department of Transportation (NJDOT) advises each contractor or subcontractor that failure to carry out the requirements set forth in this attachment shall constitute a breach of contract and, after the notification of the applicable federal agency, may result in termination of the agreement or contract by the Department or such remedy as the Department deems appropriate. Requirements set forth in this section shall also be physically included in all subcontracts in accordance with USDOT requirements.

II. POLICY.

It is the policy of the NJDOT that Emerging Small Business Enterprises (ESBE), as defined in Section IV, Part B below, shall have an opportunity to participate in the performance of contracts financed in whole or in part with federal funds. In furtherance of this policy the NJDOT has established an Emerging Small Business Enterprise Program. This program is designed to promote participation and shared economic opportunity by smaller firms who qualify as ESBE's in NJDOT construction contracts and is undertaken pursuant to the authority contained in 23 CFR Part 26.

III. CONTRACTOR'S ESBE OBLIGATION.

The contractor agrees to ensure that ESBE's, as defined in Section IV, Part B below, have an equal opportunity to participate in the performance of contracts and subcontracts financed in whole or in part with federal funds. In performing work under this agreement with the NJDOT, the contractor shall take all necessary and reasonable steps in accordance with the provisions of this attachment to ensure that ESBE's have the maximum opportunity to compete for and perform contracts. The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of any contract obligation including, but not limited to, its performance of its obligations under this ESBE attachment.

IV. GOALS FOR THIS PROJECT.

- A. This project includes a goal of awarding 8 percent of the total contract value to subcontractors, equipment lessors and/or material suppliers, which qualify as ESBE's.
 - 1. Failure to meet the minimum goal placed on this project, or to provide a good faith effort to meet the minimum goal, may be grounds for rejection of the bid as being non-responsive.

2. As a source of information only, an ESBE Directory is available from the Division of Civil Rights/Affirmative Action. Use of this listing does not relieve the contractor of its responsibility to seek out ESBE's not listed, prior to bid. If a contractor proposes to use an ESBE contractor not listed in the ESBE Directory, the proposed ESBE firm must submit a completed certification application to the Division of Civil Rights/Affirmative Action, fifteen (15) days prior to bid date.

B. DEFINITIONS.

1. Emerging Small Business Enterprise is defined as: a for-profit business concern classified as a small business pursuant to the appropriate Small Business Administration regulations, and which is owned and controlled by individuals who do not exceed the personal net worth criteria (\$750,000) established in 49 CFR Part 26.
2. Owned and Controlled is defined as: that at least 51% of the ownership interests as well as the management and daily business operations of the firm reside in individuals whose personal net worth does not exceed the requirements established in 49 CFR, Part 26.

V. COUNTING ESBE PARTICIPATION.

- A. Each ESBE is subject to a certification procedure to ensure its ESBE eligibility status prior to the award of contract. In order to facilitate this process it is advisable for the bidder to furnish names of proposed ESBE's to the Department 15 days before bid opening. Once a firm is determined to be a bona fide ESBE by the Division of Civil Rights/Affirmative Action, the total dollar value of the contract awarded to the ESBE is counted toward the applicable goal.
- B. The contractor may count toward its ESBE goal only expenditures to ESBE's that perform a commercially useful function in the work of a contract. An ESBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibility by actually performing, managing and supervising the work involved. To determine whether an ESBE is performing a commercially useful function, the contractor shall evaluate the amount of work contracted, industry practice and other relevant factors.
- C. If a ESBE does not perform or exercise responsibility for at least 30 percent of the total cost of its contract with its own work force, or the ESBE subcontracts a greater portion of the work of a contract than would be expected on the basis of normal industry practice for the type of work involved, you must presume that it is not performing a commercially useful function.

- D. If the prime contractor is a certified ESBE, payments made to the contractor for work performed by the contractor will be applied toward the ESBE goal. Payments made to the prime contractor for work performed by non-ESBE's will not be applied toward the ESBE goal.
- E. The prime contractor may count 60 percent of its expenditures to ESBE suppliers that are not manufacturers, provided that the ESBE supplier performs a commercially useful function in the supply process. The contractor may count 100% of its expenditure to ESBE suppliers who are also manufacturers. Manufacturers receive 100% credit toward the ESBE goal.

VI. GOOD FAITH EFFORT.

To demonstrate sufficient reasonable efforts to meet the ESBE contract goals, a bidder shall document the steps it has taken to obtain ESBE participation, including but not limited to the following:

- A. Attendance at a pre-bid meeting, if any, scheduled by the Department to inform ESBE's of prime contracting and subcontracting opportunities under a given solicitation.
- B. Advertisement in general circulation media, trade association publications, and small business publications for at least 20 days before bids are due. If 20 days are not available, publication for a shorter reasonable time is acceptable.
- C. Written notification to ESBE's that their interest in the contract is solicited;
- D. Efforts made to select portions of the work proposed to be performed by ESBE's in order to increase the likelihood of achieving the stated goal;
- E. Efforts made to negotiate with ESBE's for specific bids including at a minimum:
 - 1. The names, addresses and telephone numbers of ESBE's that were contacted;
 - 2. A description of the information provided to ESBE's regarding the plans and specifications for the work to be performed; and
 - 3. A statement of why additional agreements with ESBE's were not reached;
- F. Information regarding each ESBE the bidder contacted and rejected as unqualified and the reasons for the bidder's conclusion;
- G. Efforts made to assist the ESBE in obtaining bonding or insurance required by the bidder or the department.

NOTE: If the Division of Civil Rights/Affirmative Action determines that the apparent successful low bidder has failed to meet the requirements of this section, the bidder will be afforded the opportunity for an administrative reconsideration of that determination prior to the award or rejection of the contract. As part of the administrative reconsideration process, the bidder will have the opportunity to provide written documentation or argument concerning the issue of whether it met the goal or made adequate good faith efforts to do so. NJDOT will send the bidder a written decision on reconsideration, explaining the basis for finding that the bidder did or did not meet the goal or make adequate good faith efforts to do so. The result of the reconsideration process is not administratively appealable to the USDOT.

VII. SUBMISSION OF REQUIRED DOCUMENTS.

- A. The following shall be submitted either with the bid or to the Division of Civil Rights and Affirmative Action no later than seven (7) State business days after the date of receipt of bids.
 1. ESBE Form "A2" - Schedule of ESBE Participation. List all ESBE's participating in the contract; listing the scope of work, dollar value and percent of total contract to be performed.
 2. Supplement to ESBE Form "A2"- A list of all subcontractors who submitted bids or quotes on this project.
 3. ESBE Form B - Affidavit of Emerging Small Business Enterprise. Each proposed ESBE not listed in the NJDOT ESBE directory must submit Form B attesting to its validity as an ESBE. (All firms must be certified by the Department's ESBE Coordinator prior to award of the contract).
 4. Request for Exemption - In the event that the bidder fails to meet the specified goal, they must submit within Seven State business days of the bid, a written request for exemption to the goal. This request must include a written statement addressing Items A through G in Article VI of this attachment in addition to an accounting of the reason(s) why each items in the bid proposal was not subcontracted. Submittal of such request does not imply departmental approval. An assessment of the material will be conducted by the Department's Division of Civil Rights/Affirmative Action.
 5. The name of the person who is serving as its ESBE Liaison Officer
- B. The State Highway Engineer will be the sole judge of proper compliance and action taken in fulfilling the requirements as set forth herein.

VIII. ESBE LIAISON OFFICER.

- A. The contractor shall designate an ESBE Liaison Officer who shall be responsible for the administration of its ESBE program in accordance with the requirements of this attachment.

IX. OBLIGATIONS AFTER AWARD OF THE CONTRACT.

If at any time following the award of contract, the contractor intends to sublet any portion(s) of the work under said contract, or intends to purchase material or lease equipment not contemplated during preparation of bids, said contractor shall take the following actions:

1. Notify the Resident Engineer, in writing, of the type and approximate value of the work the contractor intends to accomplish by such subcontract, purchase order or lease.
2. Attempt to obtain a qualified ESBE to perform the work.
3. Submit the Post-Award ESBE Certification Form to the Regional Supervising Engineer with his application to sublet or prior to purchasing material or leasing equipment. Post Award ESBE forms may be obtained from the Resident Engineer.

X. CONSENT BY DEPARTMENT TO SUBLETTING.

The Department will not approve any subcontract proposed by the Contractor unless and until said contractor has complied with the terms of this attachment.

XI. SELECTION AND RETENTION OF SUBCONTRACTORS.

- A. The contractor is further obligated to provide the Resident Engineer with a listing of firms, organizations or enterprises solicited and those utilized as subcontractors on the proposed project. Such listing shall clearly delineate which firms are classified as an ESBE.
- B. The contractor shall identify all efforts it made to identify and retain an ESBE as a substitution subcontractor when the arrangements with the original ESBE proved unsuccessful shall be submitted in writing to the Department's ESBE Coordinator for approval. Work in the category concerned shall not begin until such approval is granted in writing.
- C. Notification of a subcontractor's termination will be sent to the Department by the contractor through the Resident Engineer. Said termination notice will state whether the subcontractor is an ESBE and the reason for termination.

XII. CONCILIATION.

Allegations of breach of any obligation contained in these ESBE provisions will be investigated by the Federal Office of Contract Compliance in conjunction with the Division of Civil Rights/Affirmative Action of the New Jersey Department of Transportation and the Federal Highway Administration.

XIII. DOCUMENTATION.

A. The Department or the federal funding agencies may at any time require such information as is deemed necessary in the judgement of the Department to ascertain the compliance of any bidder or contractor with the terms of these provisions.

B. Record and Reports.

The Contractor shall keep such records as are necessary to determine compliance with its Emerging Small Business Enterprise Utilization obligations. The records kept by the contractor will be designed to indicate:

1. The names of ESBE contractors, equipment lessors and material suppliers contacted for work on this project.
2. Work, services and materials which are not performed or supplied by the prime contractor.
3. The actual dollar value of work subcontracted and awarded to ESBE's.
4. Efforts taken in seeking out and utilizing ESBE's. This would include solicitations, quotes and bids regarding project work items, supplies, leases, or other contract items.
5. Documentation of all correspondence, contacts, telephone calls, or other actions taken to obtain the services of ESBE's on this project.
6. Records of all ESBE's who have submitted quotes/bids to the contractor on the project.

C. Submit reports, as required by the Department, on those contracts and other business transactions executed with ESBE's in such form and manner as may be prescribed by the Department.

D. All such records must be maintained for a period of three (3) years following acceptance of final payment and will be available for inspection by the Department.

XIV. PAYMENT TO SUBCONTRACTORS.

The Contractor agrees to pay its subcontractors in accordance with Subsections 109.05 and 109.07 of the 1996 Standard Specifications, as amended.

XV. NON-COMPLIANCE.

Failure by the bidder to comply with these provisions may result in rejection of the bid. The contractor may further be declared ineligible for future Department contracts.

EQUAL EMPLOYMENT OPPORTUNITY SPECIAL PROVISIONS

1. General

- a. Equal employment opportunity requirements not to discriminate and to take affirmative action to assure equal employment opportunity as required by Executive Order 11246 and Executive Order 11375 are set forth in Required Contract Provisions (Form FHWA-1273) and these Special Provisions which are imposed pursuant to Section 140 of Title 23 USC, as established by Section 22 of the Federal Aid Highway Act of 1968. The requirements set forth in these Special Provisions shall constitute the specific affirmative action requirements for project activities under this contract and supplement the Equal Employment Opportunity requirements set forth in the Required Contract Provisions.
- b. The Contractor will work with the State agencies and the Federal Government in carrying out Equal Employment Opportunity obligations and in their review of activities under the contract.
- c. The Contractor and all subcontractors holding subcontracts, not including material suppliers, of \$10,000 or more, will comply with the following minimum specific requirement activities of Equal Employment Opportunity. The Contractor will include these requirements in every subcontract of \$10,000 or more with such modification of language as is necessary to make them binding on the subcontractor. (The equal employment opportunity requirements of Executive Order 11246, as set forth in Volume 6, Chapter 4, Section 1, Subsection 1 of the Federal-Aid Highway Program Manual, are applicable to material suppliers as well as contractors and subcontractors).
- d. Noncompliance by the Contractor with the requirements of the Affirmative Action Program for Equal Employment Opportunity may be cause for delaying or withholding monthly and final payments pending corrective and appropriate measures by the Contractor to the satisfaction of the Department.

2. Equal Employment Opportunity Policy

The Contractor will accept as its operating policy the following statement which is designed to further the provisions of equal employment opportunity to all persons without regard to their race, color, religion, sex, or national origin, and to promote the full realization of equal employment opportunity through a positive continuing program:

It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, or national origin. Such action shall include employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and on-the-job training.

3. Equal Employment Opportunity Officer

The Contractor will designate and make known to the Department contracting officers an equal opportunity officer (hereinafter referred to as the EEO Officer) who will have the capability, authority and responsibility to effectively implement and promote an active contractor program of equal employment opportunity.

4. Dissemination of Policy

a. All members of the Contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommended such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the Contractor's equal employment opportunity policy and contractual responsibilities to provide equal employment opportunity in each grade and classification of employment. To ensure compliance, the following minimum actions will be taken:

- (1) An initial project site meeting with key supervisory and office personnel will be conducted before or at the start of work, and then not less than once every 6 months, at which time the Contractor's equal employment opportunity program will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.
- (2) All new supervisory and office personnel will be given a thorough indoctrination by the EEO Officer or other knowledgeable company official covering all major aspects of the Contractor's equal employment opportunity obligations within 30 days following their reporting for duty with the Contractor.
- (3) All personnel engaged in direct recruitment for the project will be instructed by the EEO Officer or appropriate company official concerning the Contractor's procedures for locating and hiring minority and female employees.

b. In order to make the Contractor's equal employment opportunity policy known to all employees, prospective employees and potential sources of employees, i.e., schools, employment agencies, labor unions (where appropriate), college placement officers, etc., the Contractor will take the following actions:

- (1) Notices and posters setting forth the Contractor's equal employment opportunity policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
- (2) The Contractor's equal employment opportunity policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, and/or other appropriate means.

5. Recruitment

- a. When advertising for employees, the Contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer". All such advertisements will be published in newspapers or other publications having a large circulation among minority groups in the area from which the project work force would normally be derived.
- b. The Contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority and female applicants, including, but not limited to, State employment agencies, schools, colleges and minority-oriented organizations. To meet this requirement, the Contractor will, through his EEO Officer, identify sources of potential minority and female employees, and establish procedures with such sources whereby applicants may be referred to the Contractor for employment consideration.

In the event the Contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the Contractor's compliance with the equal employment opportunity contract provisions. (The US Department of Labor has held that where implementation of such agreements have the effect of discriminating against minorities or females, or obligates the Contractor to do the same, such implementation violates Executive Order 11246, as amended).

- c. The Contractor will encourage his present employees to refer minority and female applicants for employment by posting appropriate notices or bulletins in areas accessible to all such employees. In addition, information and procedures pertaining to the referral of applicants will be discussed with employees.

6. Personnel Actions

Wages, working conditions and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, or national origin. The following procedures shall be

followed:

- a. The Contractor will conduct a project site inspection at the start of work, and periodically thereafter, to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
- b. The Contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
- c. The Contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the Contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
- d. The Contractor will promptly investigate all complaints of alleged discrimination made to the Contractor in connection with its obligations under this contract, and will resolve or attempt to resolve such complaints, within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, corrective action shall include such other persons. Upon completion of each investigation, the Contractor will inform complainants of available avenues of appeal.

7. Training Special Provisions

As part of the Contractor's equal employment opportunity affirmative action program, training shall be provided as follows:

The Contractor shall provide on-the-job training aimed at developing full journeypeople in the type of craft or job classification involved.

The number of training positions will be 2, where feasible consisting of at least 1 apprentices and 1 apprentice graduates of the Pre-Apprenticeship Training Cooperative Program, sponsored by the signatories of the October 26, 1994 Memorandum of Understanding, and/or trainees.

Apprentices are defined as registered members of an approved apprenticeship program recognized by the United States Department of Labor (USDOL) Bureau of Apprenticeship and Training (BAT) or a New Jersey State apprenticeship agency recognized by USDOL BAT (e.g., New Jersey Department of Education). Graduates of the Pre-Apprenticeship Training Cooperative Program shall be classified as apprentices. Trainees are defined as skilled, semi-skilled or lower level management individuals receiving training per one of the approved NJDOT "Revised Standard Training Guidelines" (available from the Division of Civil Rights).

Where feasible, at least 50% of the training positions will be assigned to Skilled Crafts which include but are not limited to Carpenters, Dockbuilders, Electricians, Ironworkers and Operating Engineers.

a. Contractor Submission and NJDOT Approval of the Initial Training Program.

At or after the preconstruction conference and prior to the start of work, the Contractor shall submit a training program to the Resident Engineer for his or her review and comments prior to Division of Civil Rights review and approval. The Contractor's training program shall include:

- (1) the number of trainees or apprentices to be trained in all selected Training Positions,
- (2) the Standard Program Hours for all positions,
- (3) an estimate of the Minimum Available Hours actually feasible on the project toward completion of the Standard Program Hours per position,
- (4) a training schedule of Estimated Start Dates for the apprentices or trainees, developed and coordinated with the project's work progress schedule,
- (5) Training Guidelines for all positions, and
- (6) which training will be provided by the Contractor and which by Subcontractors.

The number of apprentices and trainees shall be distributed among the work classifications on the basis of the Contractor's needs and the availability of journeypeople in the various crafts within a reasonable area of recruitment. The Contractor shall submit timely, revised training programs as required throughout the project to ensure that feasible and Maximum Available Training is provided. Maximum Available Training is defined as bringing each apprentice or trainee onto the project when work first becomes available in his/her craft and providing all available training until hours are no longer available.

b. Assignment of Training to Subcontractors

In the event that portions of the contract work are subcontracted, the Contractor shall determine how many, if any, of the apprentices or trainees are to be trained by subcontractors, provided, however, that the Contractor shall retain the primary responsibility for meeting the training requirements imposed by these Training Special Provisions. The Contractor shall also ensure that these Training Special Provisions are made applicable to such subcontracts.

c. Requirements for Recruitment, Selection and Approval of Apprentices and Trainees

- (1) Apprentices or trainees should be in their first year of apprenticeship or training. The Contractor shall interview and screen trainee candidates to determine if their actual work experience is equivalent to or exceeds that offered by the training program prior to submitting candidates, via the Resident Engineer, to the Division for review and approval or disapproval.
- (2) Training and upgrading of minorities (e.g., Blacks, Asians or Pacific Islanders, Native Americans or Alaskan Natives, Hispanics) and females toward journeyman status is a primary objective of these Training Special Provisions. Accordingly, the Contractor shall make every effort to enroll minorities and females, by conducting systematic and direct recruitment through public and private sources likely to yield minority and female apprentices or trainees, to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.
- (3) No employee shall be employed as an apprentice or trainee in any position in which he or she has successfully completed a training course leading to journeyman status or in which he or she has been employed as a journeyman. The Contractor shall satisfy this requirement by including appropriate questions in the employment application or by other suitable means and by submitting an accurate and complete "Apprentice/Trainee Approval Memorandum." Regardless of the methods used, the Contractor's records should document the findings in each case.
- (4) Skilled craft trainees may complete up to 3,000 total training hours on NJDOT projects, with an extension of an additional 1,000 hours permitted on a case-by-case basis. Semi-skilled and lower-level management trainees attain journeyman status upon completion of a training guideline and may complete up to three (3) different positions.

d. Apprenticeship and Training Programs

- (1) The minimum length and type of training for each position will be established in the training program selected by the Contractor and approved by NJDOT and the Federal Highway Administration. NJDOT will approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Contractor and to qualify the average apprentice or trainee for journeyman status in the craft concerned by the end of the training period.
- (2) Apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by USDOL BAT and training programs approved but

not necessarily sponsored by the US Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training shall also be considered acceptable provided such programs are being administered in a manner consistent with the equal employment obligations of Federal-aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the NJDOT Division of Civil Rights prior to commencing work on the positions covered by the Contractor's training program. The Division will review guidelines developed by the Contractor for approval or disapproval in accordance with the Training Guideline Approval Process described in the "Revised Standard Training Guidelines". The Division will also review existing guidelines for revision based on the same process.

- (3) It is the intention of these provisions that training be provided in construction crafts rather than clerk-typist or secretarial-type positions. Training is permitted in lower level management positions (e.g., timekeepers), where the training is oriented toward project site applications. Training in semi-skilled laborer positions is permitted provided that significant and meaningful training is available on the project site. Some offsite, classroom training (e.g., safety, first aid instruction) may be permitted as long as such training is an integral part of an approved training program and does not comprise a significant part of the overall training.
- e. Reimbursement of the Contractor for Providing Training
- (1) The Contractor will be credited for each apprentice or trainee employed on the construction site who is currently enrolled or becomes enrolled in an approved program and will be reimbursed for such apprentices or trainees as provided hereinafter. Payment will be made under the pay item Trainees at the bid price in the Proposal per person-hour of training given an employee on this contract in accordance with an approved training program. If approved, payment will be made for training persons in excess of the number specified herein. This reimbursement will be made even though the Contractor receives additional training program funds from other sources, provided such other sources do not specifically prohibit the Contractor from receiving other reimbursement. Offsite, classroom training reimbursement may only be made to the Contractor when the company does one or more of the following and the apprentices or trainees are concurrently employed on a Federal-aid project: contributes to the cost of the training and/or provides instruction to apprentices or trainees or pays their wages during the offsite, classroom training (e.g., safety, first aid instruction) period.

- (2) The Contractor shall pay apprentices and trainees according to the project-specific New Jersey Department of Labor Prevailing Wage Rate Determination for the project.
- f. Documentation Required to be Signed by Apprentices or Trainees and provided to NJDOT
- (1) At the start of training, the Contractor shall provide the Resident Engineer and each apprentice or trainee with an applicable "Training Guideline" and, at the conclusion of training, an accurate and complete "Training Certificate for Reporting Hours to NJDOT", showing hours of training satisfactorily completed.
 - (2) The Contractor shall maintain and submit an accurate and complete "NJDOT Contractor's 1409 Quarterly Training Report" to the Resident Engineer within ten (10) days of the end of each training quarter (e.g., January 10, April 10, July 10, October 10); a copy shall also be given to each apprentice or trainee.
 - (3) The Contractor shall maintain and submit accurate and complete "Biweekly Training Reports" to the Resident Engineer, and each apprentice or trainee, as periodic reports documenting performance under these Training Special Provisions.
- g. Training and Promotion
- (1) The Contractor shall assist in locating, qualifying, and increasing the skills of minority and female employees, and applicants for employment.
 - (2) The Contractor shall advise employees and applicants for employment of available training programs and entrance requirements.
 - (3) The Contractor shall periodically review the training and promotion potential of minority and female employees and encourage eligible employees to apply for such training and promotion.
- h. Determining Good Faith Compliance
- (1) Per the approved program or guideline, the Contractor shall provide Maximum Available Training to apprentices and trainees by beginning their training as soon as feasible with the start of craft work utilizing the skill involved on the project construction site and by retaining them as long as training opportunities exist in their crafts or until their training program positions are completed.

- (2) The Contractor shall recall apprentices or trainees released due to reductions in force when the work scope permits and they are available to return. When they are unavailable to resume training on the project site, the Contractor shall submit written proof of recall efforts and replacement candidates and/or positions in a timely manner. The Contractor shall not terminate apprentices or trainees prior to completion of their training program positions without NJDOT consultation and authorization. Apprentices or trainees are not required to be on board for the entire length of the contract.
- (3) The Contractor shall have fulfilled the contractual responsibilities under these Training Special Provisions if the company has provided Acceptable Training to the number of apprentices or trainees specified in this contract and/or by providing the remaining hours required to complete training positions begun by apprentices or trainees on other projects. The number trained shall be determined on the basis of the total number enrolled on the contract for a significant period.
- (4) The Contractor shall be responsible for demonstrating all steps that have been taken in pursuance of enrolling minorities and females in the training program positions, prior to a determination as to whether the Contractor is in compliance with these Training Special Provisions.
- (5) The Contractor shall submit to the Resident Engineer written training program summaries at the 50% time and/or cost stage of the contract and also prior to project completion, describing all good faith actions and particularly addressing Maximum Available Training for incomplete training positions, per the procedure found in the revised "Instructions for Implementing the Training Special Provisions".

i. Enforcement Measures and Contractor's Rating

- (1) Payment will not be made if either the failure to provide the required training or the failure to hire the apprentice or trainee as a journeyperson is caused by the Contractor and evidences a lack of good faith on the part of the Contractor in meeting the requirements of these Training Special Provisions.
- (2) Per established procedures and scheduled Contract Compliance Reviews, the Contractor's performance will be rated and reviewed periodically by the Department.
- (3) Noncompliance with these Training Special Provisions may be cause for delaying or withholding monthly and final payments, pending corrective and appropriate measures by the Contractor to the satisfaction of the Department, per Item 1d of these EEO Special Provisions.

8. Unions

If the Contractor relies in whole or in part upon unions as a source of employees, the Contractor will make maximum effort to obtain the cooperation of such unions to increase opportunities for minorities and females within the unions, and to effect such union referrals to the construction project. Actions by the Contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

- a. The Contractor will use maximum effort to develop, in cooperation with the unions, joint training programs aimed at qualifying more minorities and females for union membership and increasing their skills in order to qualify for higher paying employment.
- b. The Contractor will use maximum effort to incorporate an equal employment opportunity clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, or national origin.
- c. The Contractor will obtain information concerning the referral practices and policies of the labor unions except that to the extent such information is within the exclusive possession of the labor unions and they refuse to furnish this information to the Contractor, the Contractor shall so certify to the Department and shall set forth what efforts have been made to obtain this information.
- d. In the event the unions are unable to provide the Contractor with a reasonable flow of minority and female referrals within the time limit set forth in the collective bargaining agreement, the Contractor will through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, or national origin, making full efforts to obtain qualified and/or qualifiable minorities and females. (The US Department of Labor has held that it shall be no excuse that the union with which the Contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees). In the event the union referral practice prevents the Contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such Contractor shall immediately notify the Department.

9. Subcontracting

- a. The Contractor will use maximum effort to solicit bids from and to utilize minority subcontractors or subcontractors with meaningful minority and female representation among their employees. Contractors may use lists of minority-owned construction firms as issued by the Department.

- b. The Contractor will use maximum effort to ensure subcontractor compliance with the equal employment opportunity obligations.

10. Documents and Reports

- a. The Contractor will maintain such documents as are necessary to determine compliance with the contract's equal employment opportunity requirements. Documents will include the following:
 - (1) the number of minorities, non-minorities, and females employed in each work classification on the Project.
 - (2) the progress and efforts being made in cooperation with unions to increase employment opportunities for minorities and females (applicable only to Contractors who rely in whole or in part on unions as a source of their work force).
 - (3) the progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees, and
 - (4) the progress and efforts being made in securing the services of minority and female subcontractors or subcontractors with meaningful minority and female representation among their employees.
- b. All such documents must be retained for a period of 3 years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the Department and the Federal Highway Administration.
- c. The Contractor and each subcontractor will complete and submit monthly, except July, to the Department Form T-AD-1276 Monthly Project Manning Report. The FHWA-1391 July report is of special interest to the Department and FHWA; therefore it must be submitted to the Resident Engineer not later than 5 calendar days following the end of July. Payments due the Contractor will be reduced by \$100 per day for each day after August 5 that the 1391 Form has not been submitted.

SPECIAL CONTRACT PROVISIONS FOR INVESTIGATING, REPORTING
AND RESOLVING EMPLOYMENT DISCRIMINATION AND SEXUAL
HARASSMENT COMPLAINTS

The contractor hereby agrees to the following requirements in order to implement fully the nondiscrimination provisions of the Supplemental Specifications.

The Contractor agrees that in instances when it receives from any person working on the project site a verbal or written complaint of employment discrimination, prohibited under N.J.S.A. 10:5-1 et seq., 10:2-1 et seq., 42 U.S.C. 2000(d) et seq., 42 U.S.C. 2000 (e) et seq. and Executive Order 11246, it shall take the following actions:

1. Within one (1) working day commence an investigation of the complaint which shall include but not be limited to interviewing the complainant, the respondent, and all possible witnesses to the alleged act or acts of discrimination or sexual harassment.
2. Prepare and keep for its use and file a detailed written investigative report which includes the following information:
 - a) Investigatory activities and findings.
 - b) Dates and parties involved and activities involved in resolving the complaint.
 - c) Resolution and corrective action taken if discrimination or sexual harassment is found to have taken place.
 - d) A signed copy of resolution of complaint by complainant and contractor.

In addition to keeping in its files the above-noted detailed written investigative report, the contractor shall keep for possible future review by the Department all other records, including but not limited to, interview memos and statements.

3. Upon the request of the Department, provides to the Department within ten (10) calendar days a copy of its detailed written investigative report and all other records on the complaint investigation and resolution.
4. Take appropriate disciplinary action against any contractor employee, official or agent who has committed acts of discrimination or sexual harassment against any contractor employee or person working on the project. If the person committing the discrimination is a subcontractor employee, then the contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with project's contract requirements.

5. Take appropriate disciplinary action against any contractor employee, official or agent who retaliates, coerces or intimidates any complaint and/or person who provides information or assistance to any investigation of complaints of discrimination or sexual harassment. If the person retaliating, coercing or intimidating a complainant or other person assisting an investigation is a subcontractor's employee, then the contractor is required to attempt to effectuate corrective and/or disciplinary action by the subcontractor in order to establish compliance with the project's contract requirements.
6. Ensure to the maximum extent possible that the privacy interests of all person who give confidential information in aid of the contractor's employment discrimination investigation are protected.

In conjunction with the above requirements, the contractor shall develop and post a written sexual harassment policy for its work force.

Failure by the contractor to comply with the above requirements may be cause for the New Jersey Department of Transportation to institute against the contractor any and all enforcement proceedings and/or sanctions authorized by the contract or by state and/or federal law.